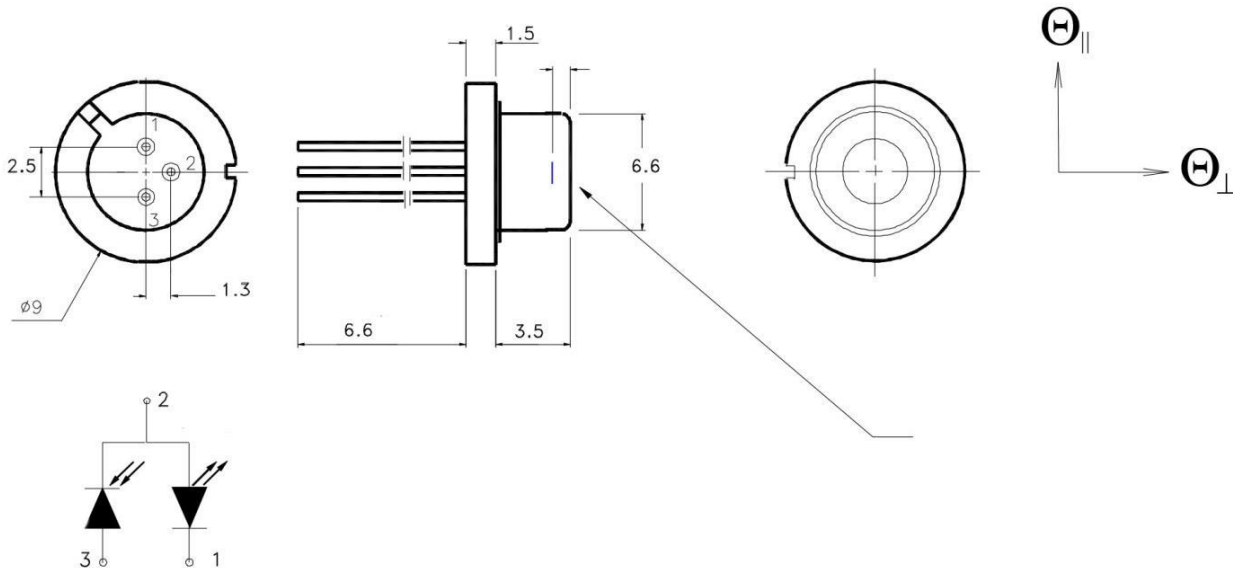


Model STFB-S1060-20SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±10	nm
CW Optical Output Power	P_{op}	20	mW
Operation Current	I_{op}	<70	mA
Operation Voltage	U_{ld}	1.3±0.2	V
Threshold Current	I_{th}	<30	mA
Beam Divergence (FWHM)	$\theta_{ }$	7±2	degree
Beam Divergence (FWHM)	θ_{\perp}	40±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.2±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.3±0.1	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

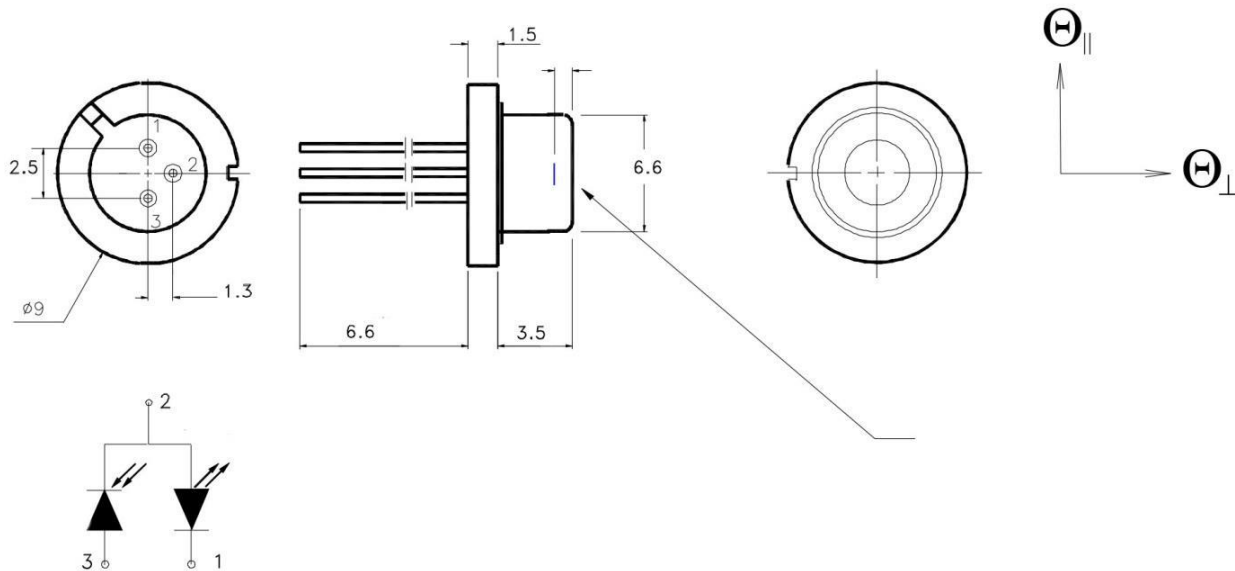
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1060-50SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±10	nm
CW Optical Output Power	P_{op}	50	mW
Operation Current	I_{op}	<100	mA
Operation Voltage	U_{ld}	1.3±0.3	V
Threshold Current	I_{th}	<35	mA
Beam Divergence (FWHM)	$\theta_{ }$	7±2	degree
Beam Divergence (FWHM)	θ_{\perp}	40±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.2±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.25±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

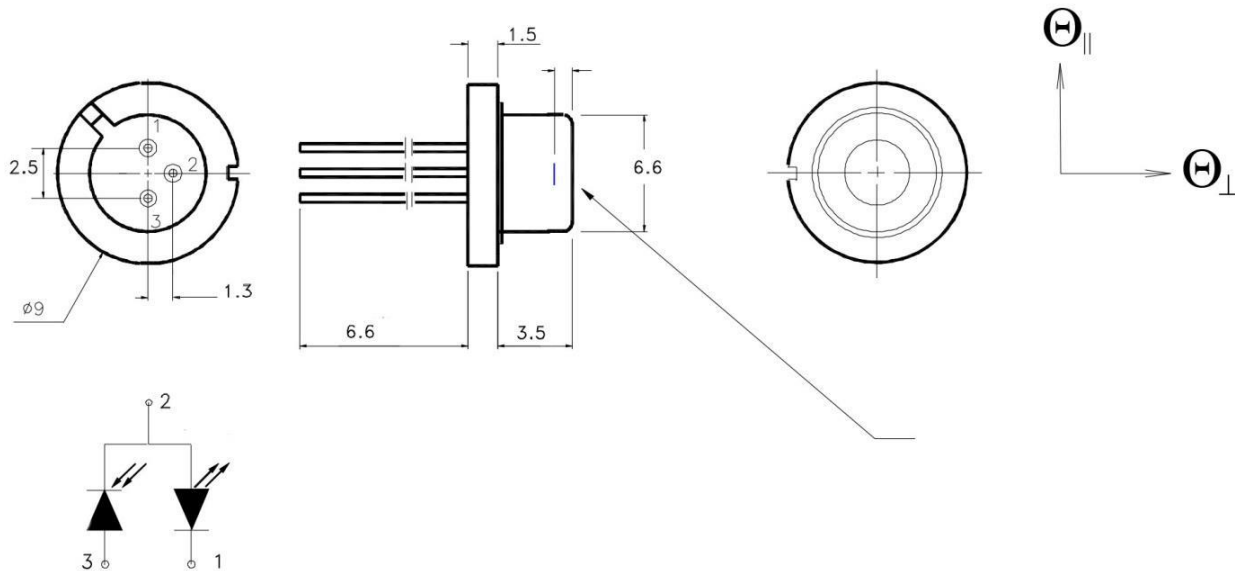
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1300-10SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1300±30	nm
CW Optical Output Power	P_{op}	10	mW
Operation Current	I_{op}	<80	mA
Operation Voltage	U_{ld}	1.1±0.2	V
Threshold Current	I_{th}	<40	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<2.5	nm
Emitting Area	$W \times d$	5x1	$\mu\text{m} \times \mu\text{m}$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.15±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.4±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

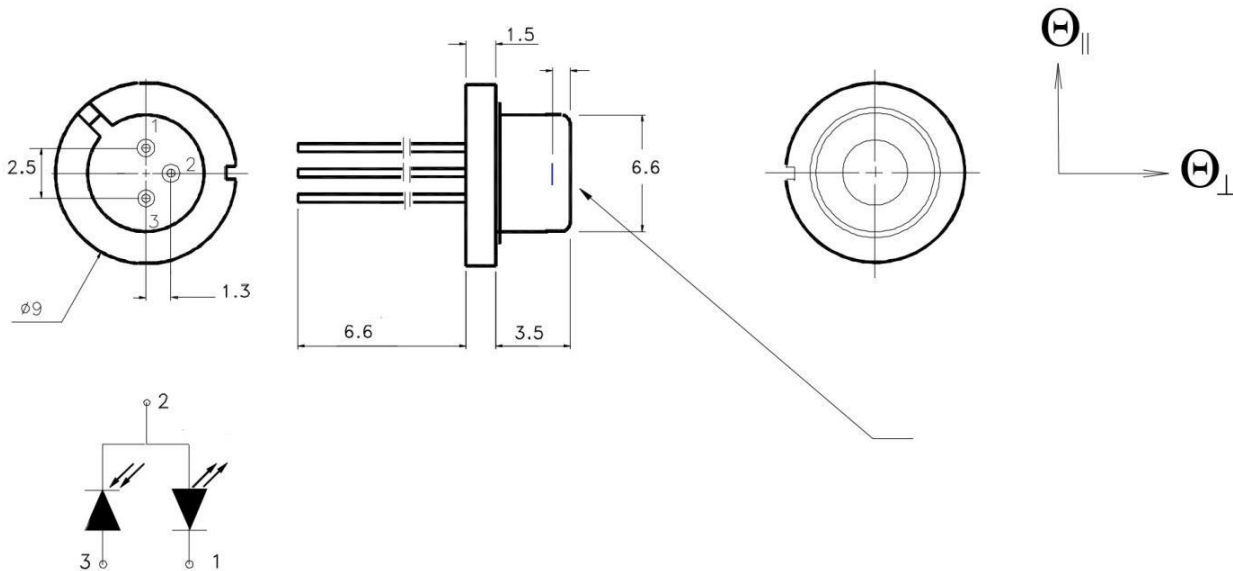
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1300-20SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1300±30	nm
CW Optical Output Power	P_{op}	20	mW
Operation Current	I_{op}	<100	mA
Operation Voltage	U_{ld}	1.2±0.2	V
Threshold Current	I_{th}	<45	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.15±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.4±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

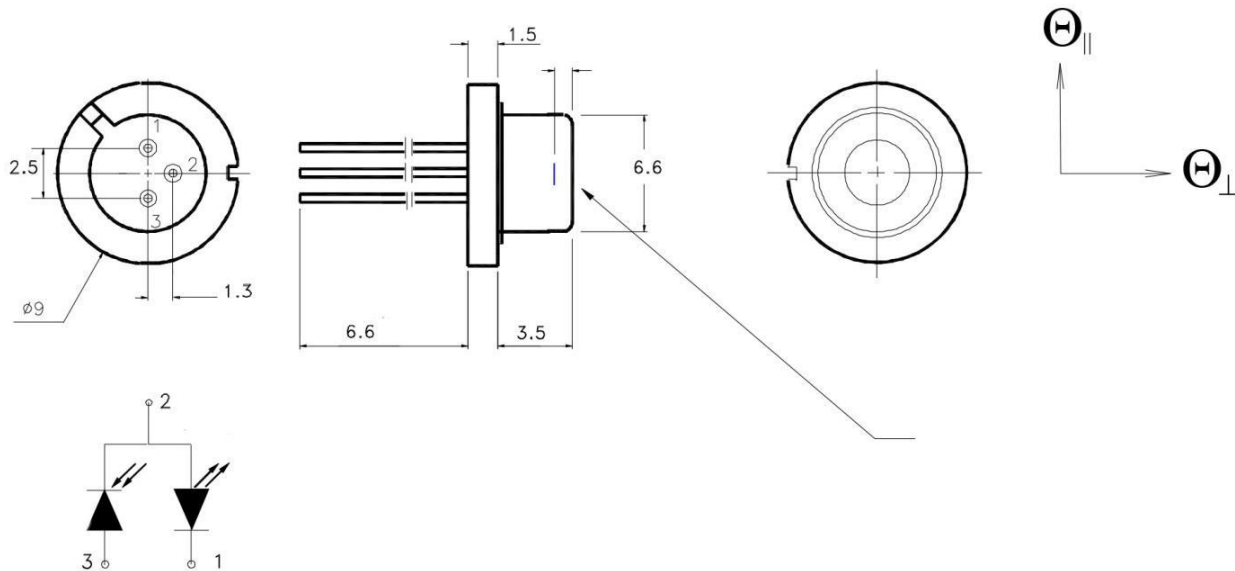
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1300-30SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1300±30	nm
CW Optical Output Power	P_{op}	30	mW
Operation Current	I_{op}	<145	mA
Operation Voltage	U_{ld}	1.2±0.2	V
Threshold Current	I_{th}	<45	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<4	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.15±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.4±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

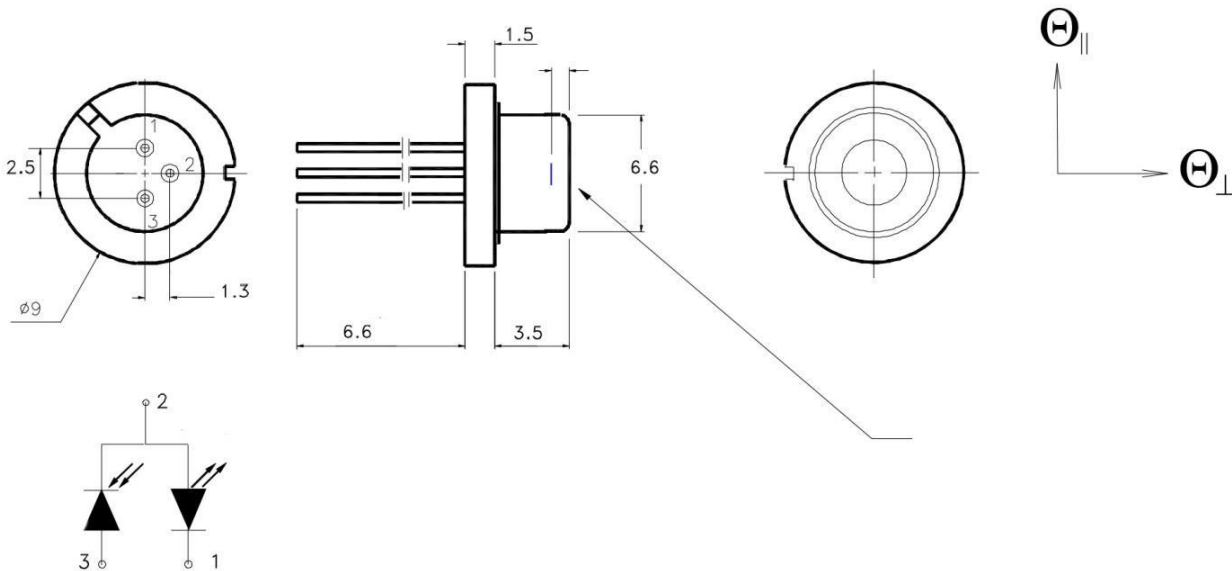
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1300-40SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1300±30	nm
CW Optical Output Power	P_{op}	40	mW
Operation Current	I_{op}	<190	mA
Operation Voltage	U_{ld}	1.3±0.2	V
Threshold Current	I_{th}	<55	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<4	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.15±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.4±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

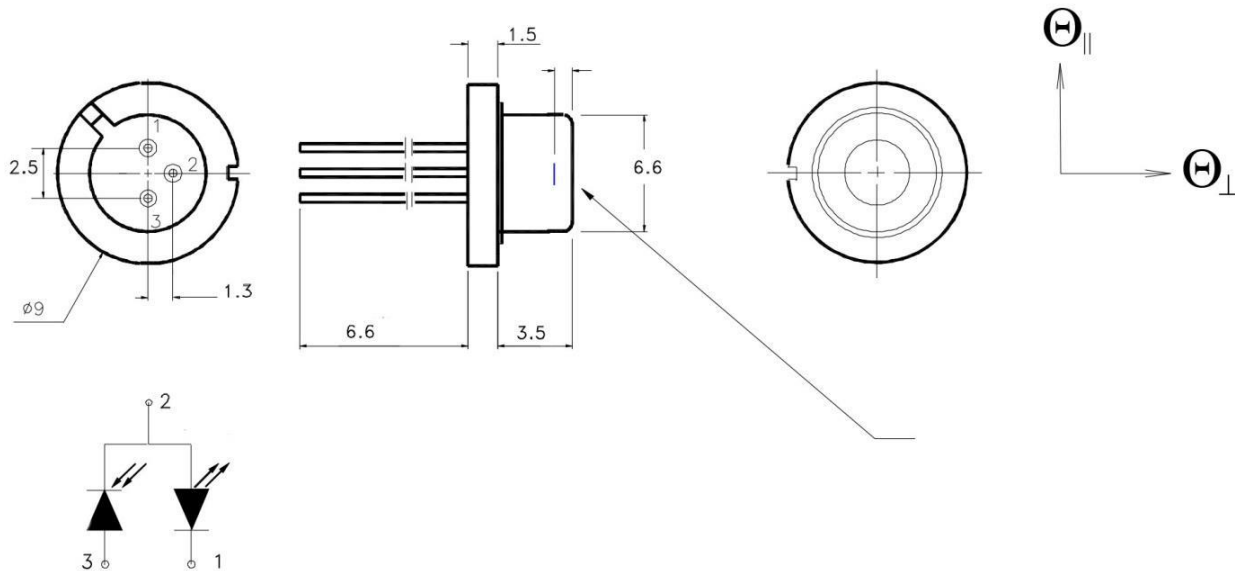
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1300-50SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1300±30	nm
CW Optical Output Power	P_{op}	50	mW
Operation Current	I_{op}	<250	mA
Operation Voltage	U_{ld}	1.3±0.2	V
Threshold Current	I_{th}	<60	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.15±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.4±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

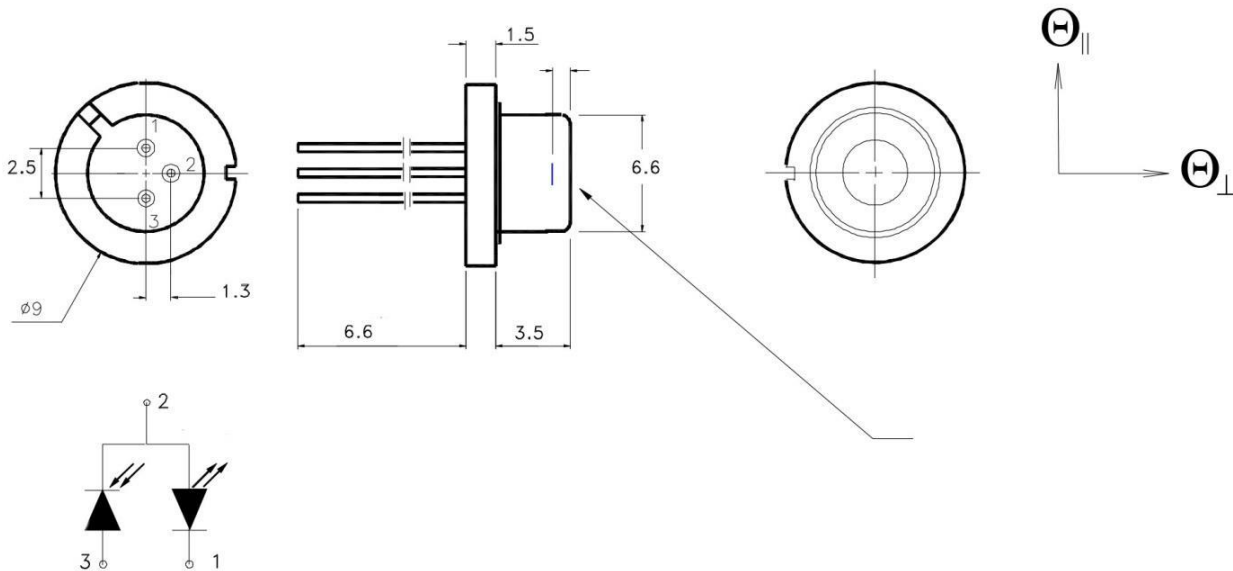
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1550-10SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1550±30	nm
CW Optical Output Power	P_{op}	10	mW
Operation Current	I_{op}	<80	mA
Operation Voltage	U_{ld}	1±0.3	V
Threshold Current	I_{th}	<40	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±5	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.1±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.6±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

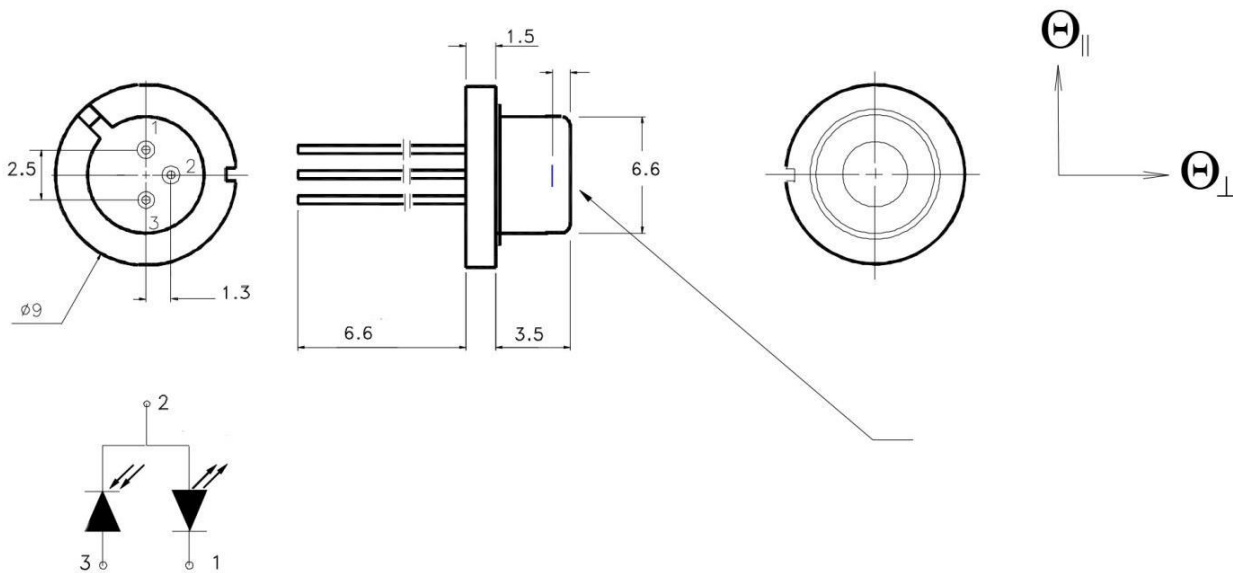
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1550-20SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1550±30	nm
CW Optical Output Power	P_{op}	20	mW
Operation Current	I_{op}	<120	mA
Operation Voltage	U_{ld}	1±0.3	V
Threshold Current	I_{th}	<45	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.2±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.7±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

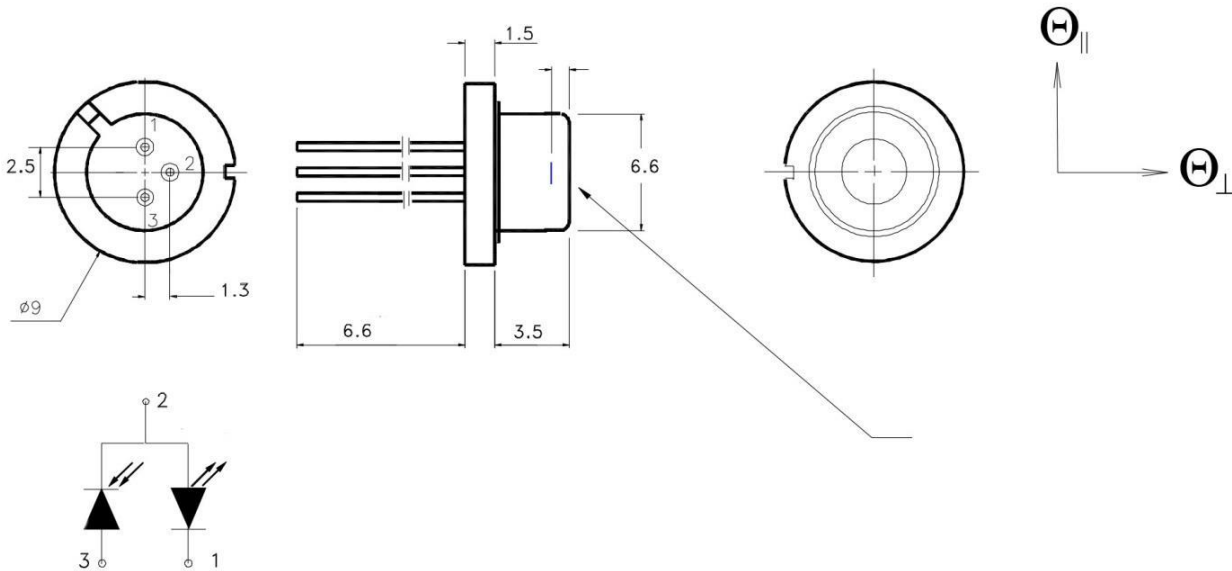
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1550-30SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1550±30	nm
CW Optical Output Power	P_{op}	30	mW
Operation Current	I_{op}	<165	mA
Operation Voltage	U_{ld}	1±0.3	V
Threshold Current	I_{th}	<45	mA
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	45±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.1±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.6±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

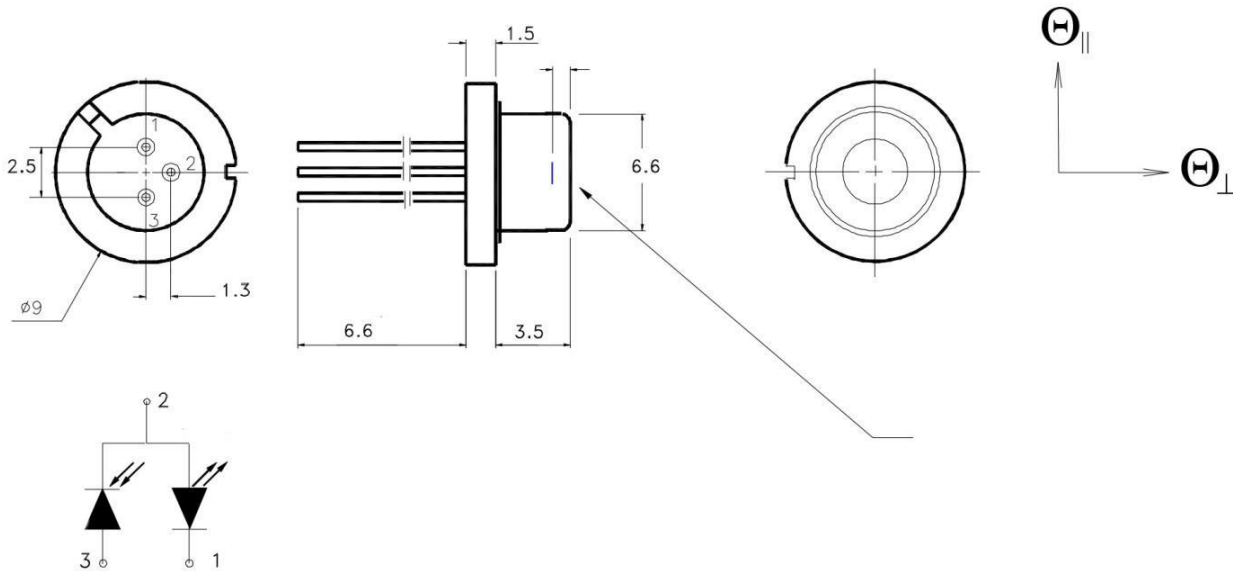
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1600-10SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1600±10	nm
CW Optical Output Power	P_{op}	10	mW
Operation Current	I_{op}	<80	mA
Operation Voltage	U_{ld}	0.8±0.2	V
Threshold Current	I_{th}	<35	mA
Beam Divergence (FWHM)	$\theta_{ }$	10±2	degree
Beam Divergence (FWHM)	θ_{\perp}	50±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.2±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.8±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

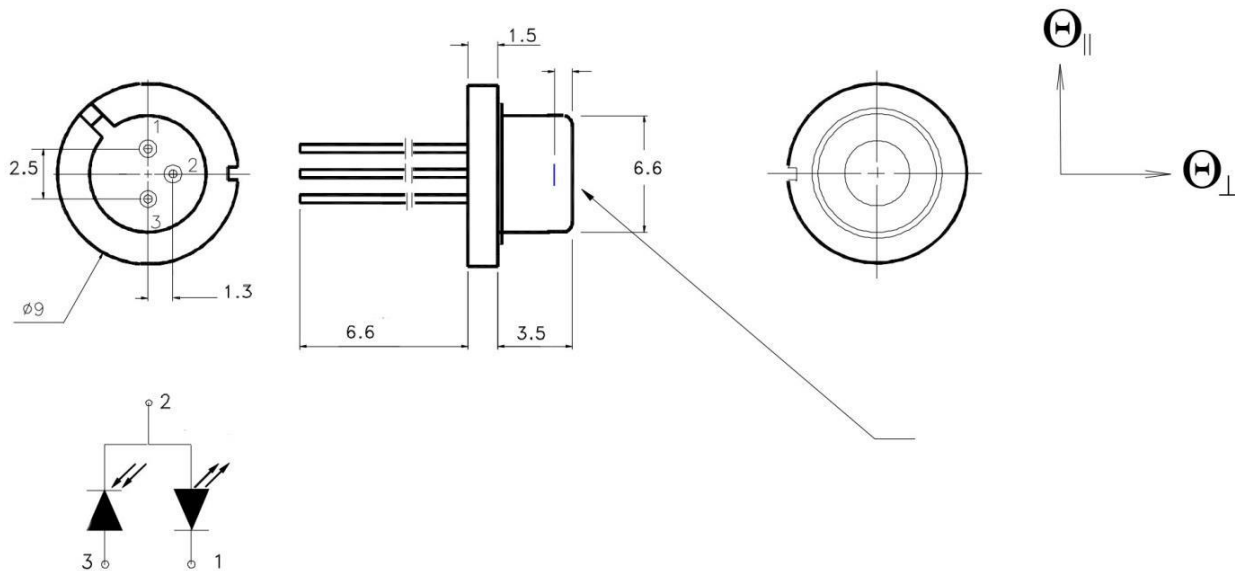
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1600-20SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1600±10	nm
CW Optical Output Power	P_{op}	20	mW
Operation Current	I_{op}	<130	mA
Operation Voltage	U_{ld}	0.8±0.2	V
Threshold Current	I_{th}	<40	mA
Beam Divergence (FWHM)	$\theta_{ }$	10±2	degree
Beam Divergence (FWHM)	θ_{\perp}	50±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	5x1	$\mu\text{m} \times \mu\text{m}$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.2±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.8±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

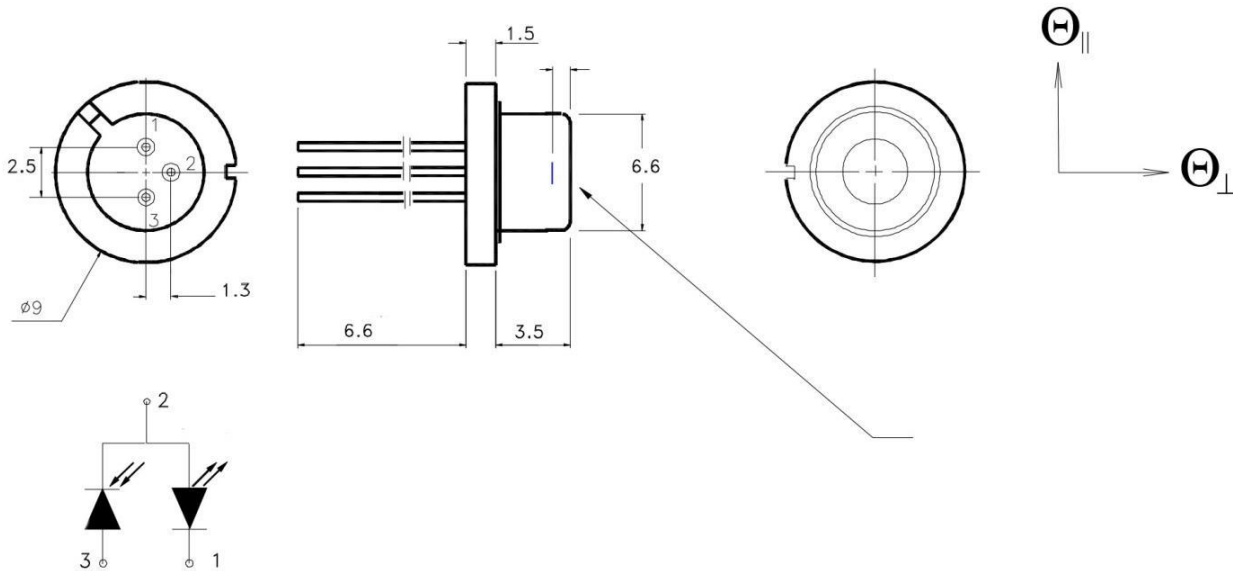
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1600-30SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1600±10	nm
CW Optical Output Power	P_{op}	30	mW
Operation Current	I_{op}	<180	mA
Operation Voltage	U_{ld}	0.8±0.3	V
Threshold Current	I_{th}	<45	mA
Beam Divergence (FWHM)	$\theta_{ }$	10±2	degree
Beam Divergence (FWHM)	θ_{\perp}	50±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.2±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.8±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

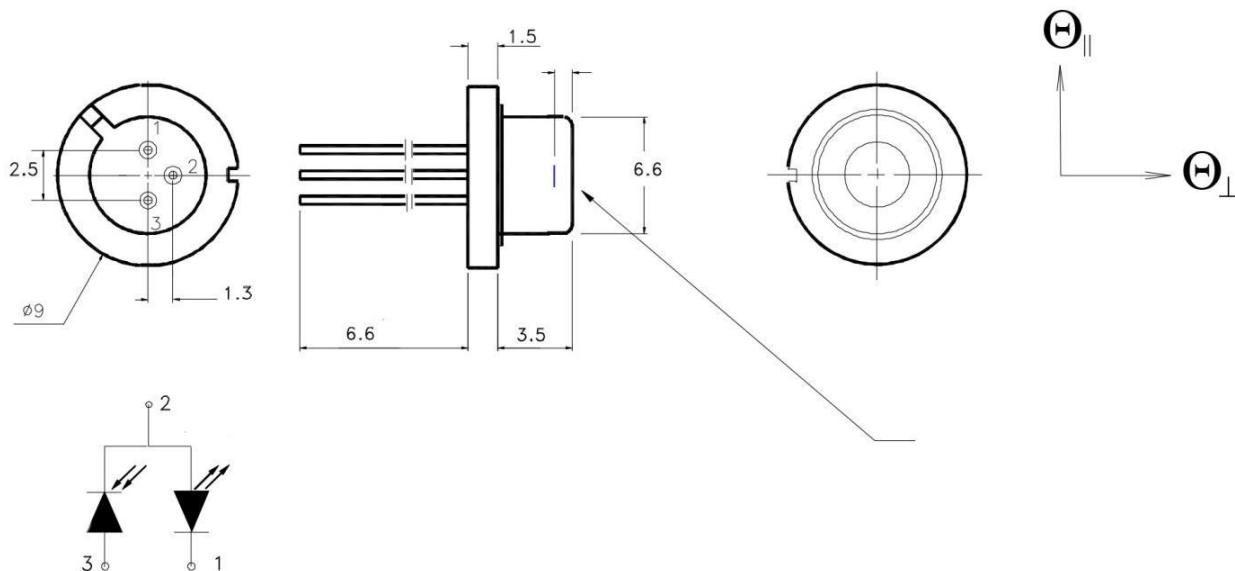
Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



Model FB-S1600-40SOT148

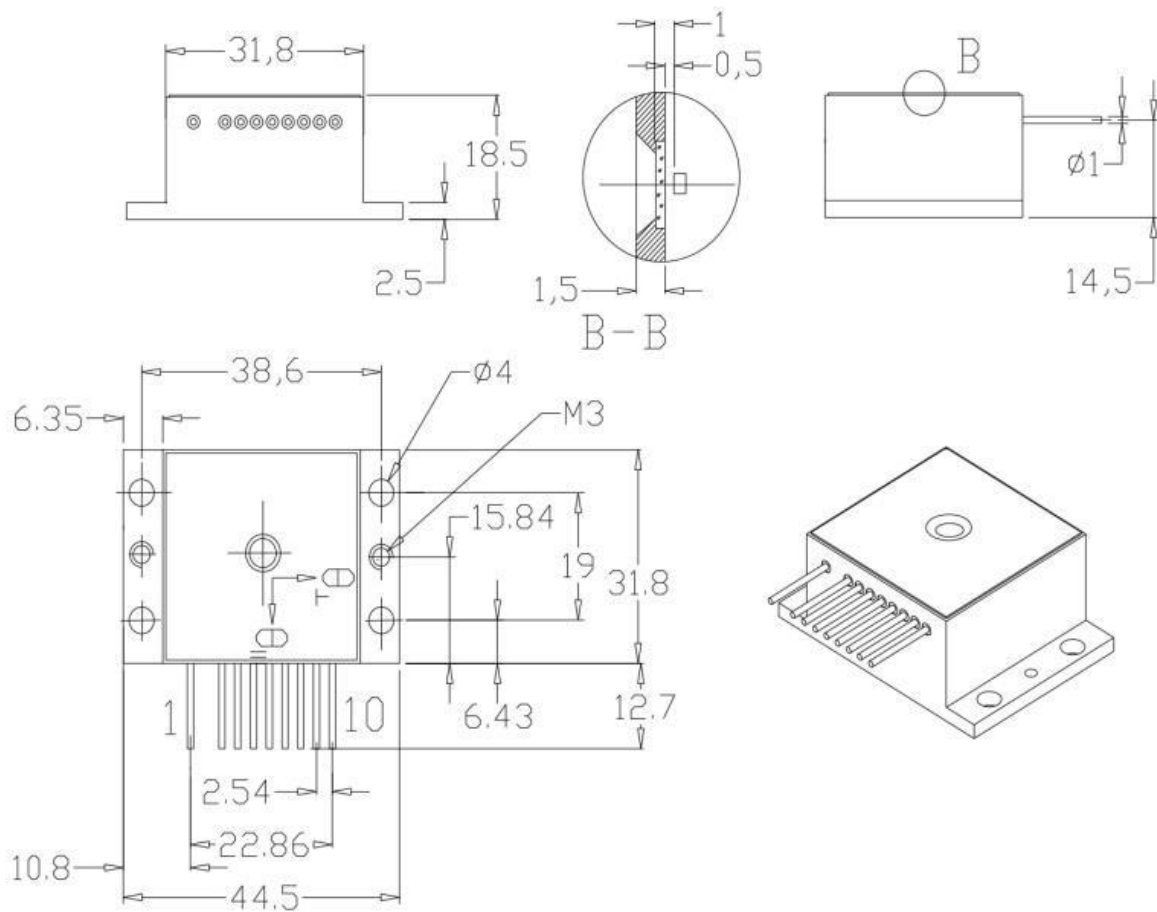
Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1600±10	nm
CW Optical Output Power	P_{op}	40	mW
Operation Current	I_{op}	<250	mA
Operation Voltage	U_{ld}	0.8±0.3	V
Threshold Current	I_{th}	<50	mA
Beam Divergence (FWHM)	$\theta_{ }$	10±2	degree
Beam Divergence (FWHM)	θ_{\perp}	50±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	5x1	$\mu m \times \mu m$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	4±0.5	nm/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.2±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.8±0.05	mA/degree
Mode Structure	SM	TE00	-
Operation Temperature	T_{op}	25	degree
Operation Temperature Range		-40... +50	degree
Storage Temperature Range		-40... +80	degree
Operation Mode	CW Pulse	Continuous Wave Pulse, $\tau > 5$ ns	-
Photo Diode Monitor			
Monitor Current		1-1000	μA
PD Reverse Voltage		<5	V

Note: To guarantee reliable operation of laser diode SOT-148 package must be mounted onto copper carrier with TEC (Peltier element) keeping constant temperature.



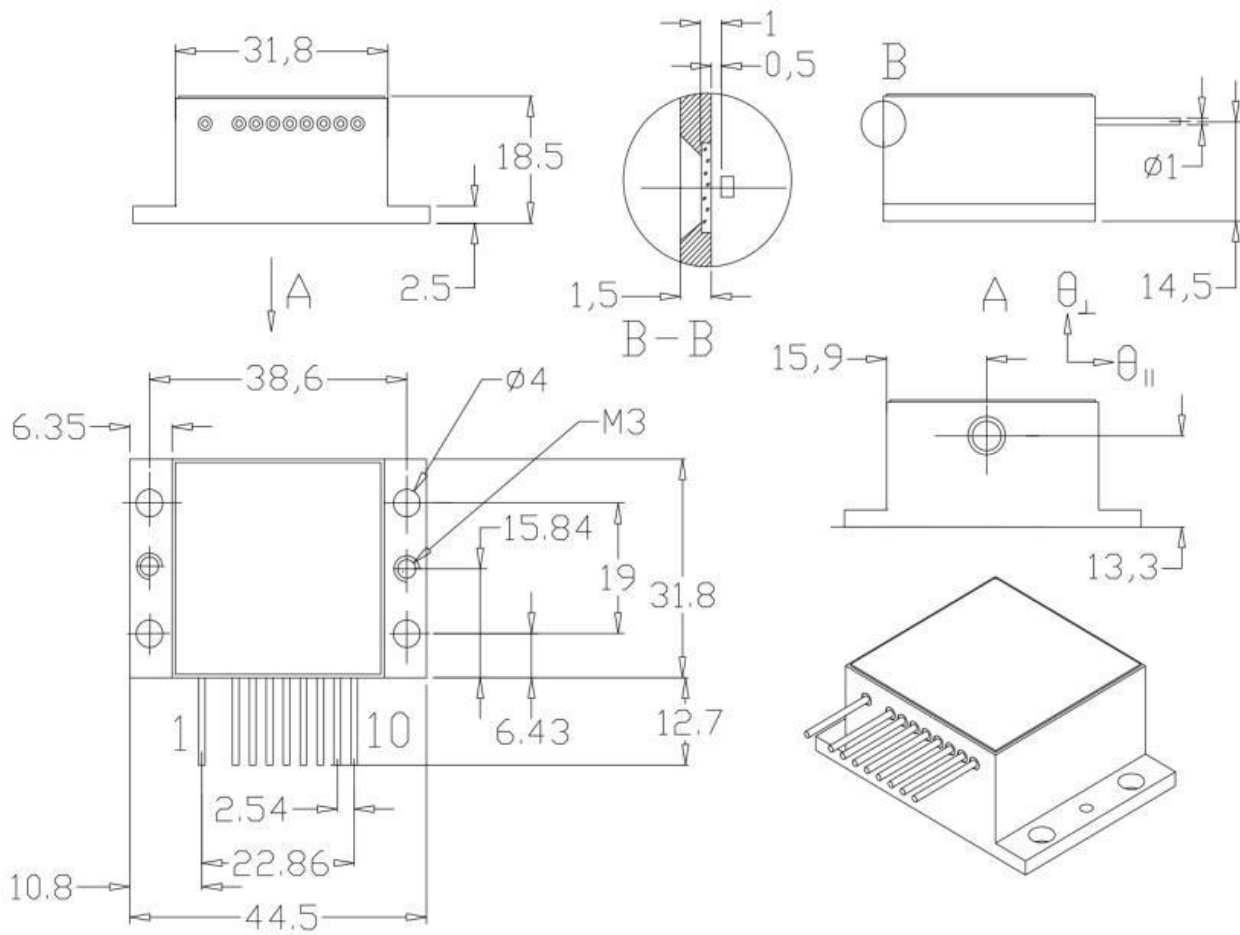
Laser Diode (HHL w/window package)
Model FB-M1060-2000HO

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±20	nm
CW Optical Output Power	P_{op}	2	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1.5±0.2	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Thermistor			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



- 1-TEC (-)
- 2-
- 3-
- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

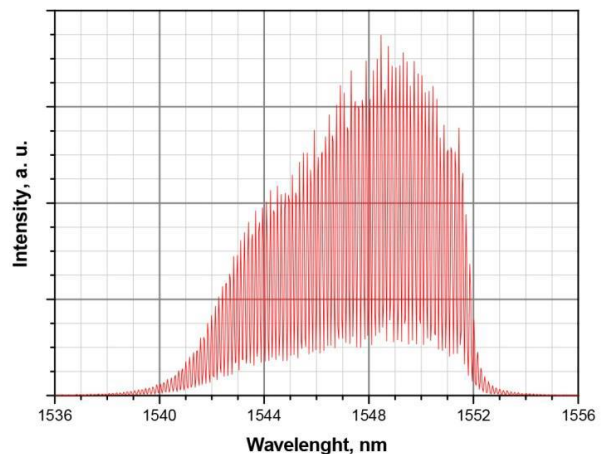
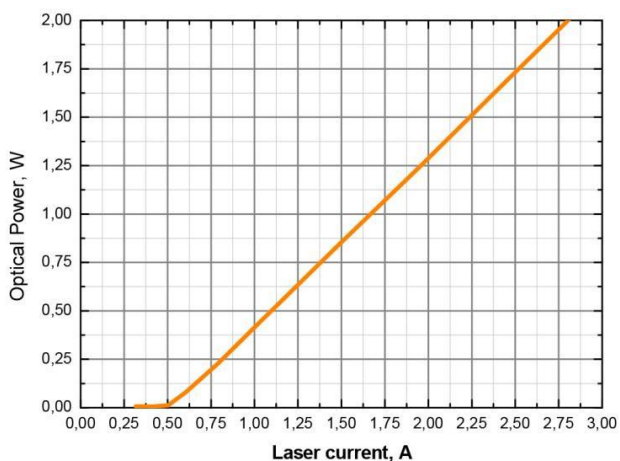
Output window of 0.5 mm in thickness

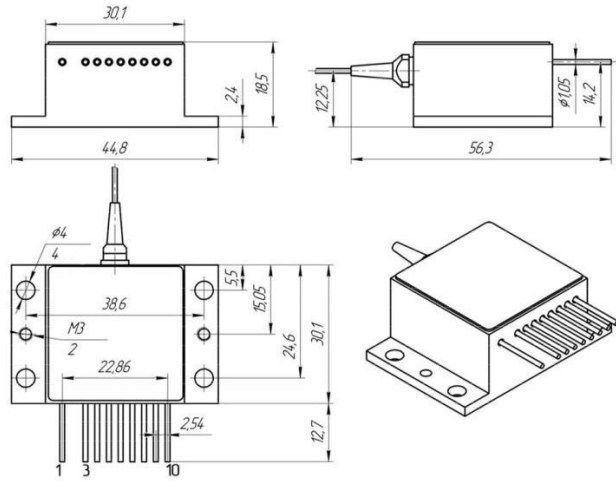
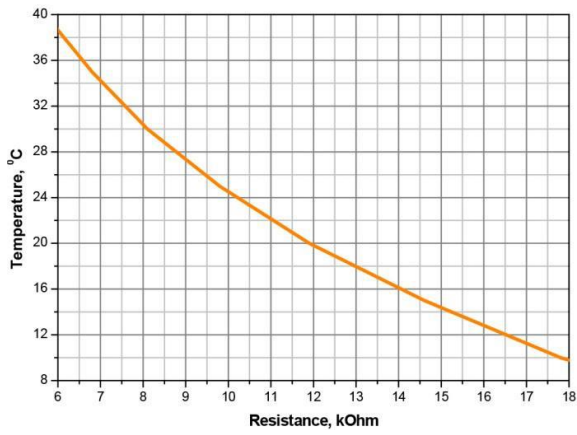


- 1- TEC (-)
 - 2-
 - 3-
 - 4- Laser Anode(+)
 - 5- Thermistor (2)
 - 6- Thermistor (1)
 - 7- Laser Cathode (-)
 - 8- PD Anode (+)
 - 9- PD Cathode (-)
 - 10- TEC (+)
- Output window of 0.5 mm in thickness

Laser Diode (HHL w/fiber package)
Model FB-M1060-2000HF

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±15	nm
CW Optical Output Power	P_{op}	2	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1.5±0.2	V
Threshold Current	I_{th}	<0.6	A
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Operating Mode		CW, QCW, pulse d	
Optical Fiber			
Fiber diameter		100	μm
Coating Diameter		125	μm
Outer Diameter		3	mm
Numerical Aperture		0.22	-
Emitting Area Fiber Length		1	m
Optical Connector Type		FC	-
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Other parameters			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Guaranteed Life Time		1	year

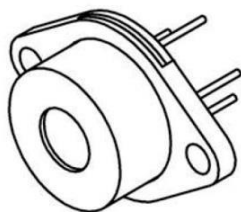
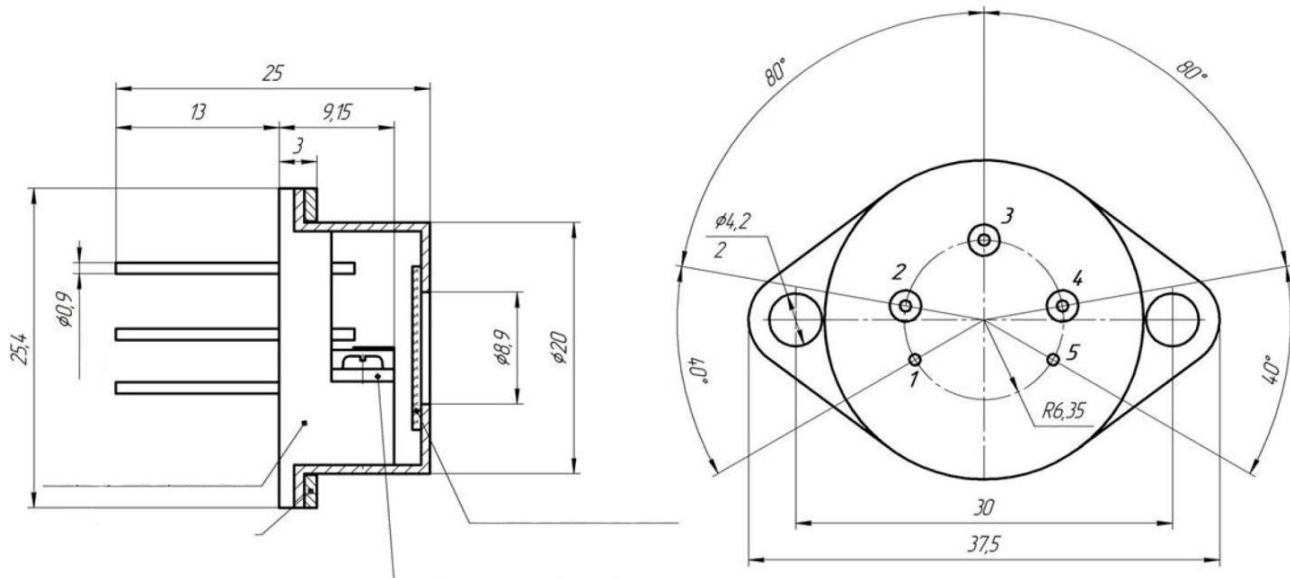




- 1-TEC (-)
- 2-
- 3-
- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Laser Diode (TO-3 package)
Model FB-M1060-2000TO3

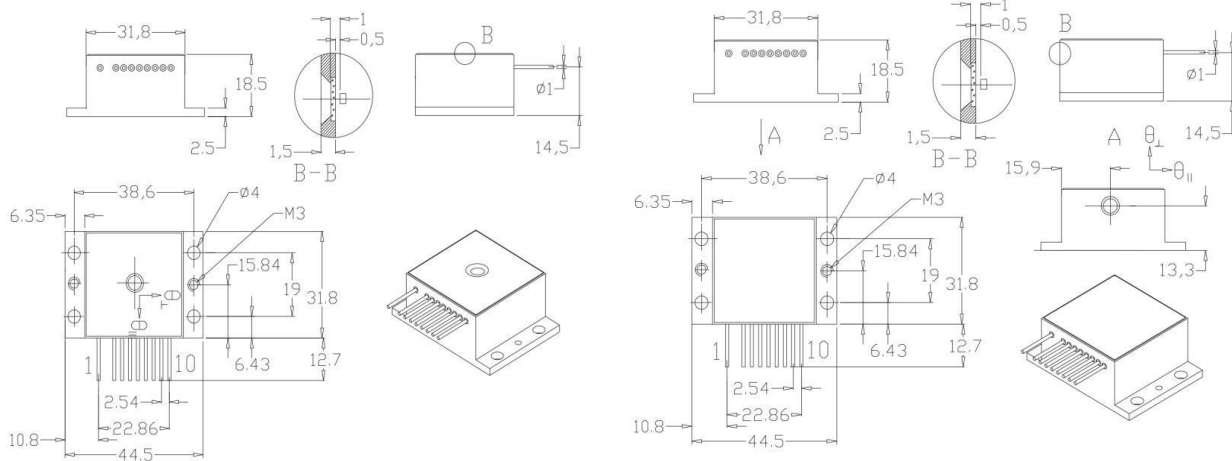
Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±20	nm
CW Optical Output Power	P_{op}	2	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1.5±0.2	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



1	«+»
2	«-»
3	
4	«-»
5	«+»

Laser Diode (HHL w/window package)
Model FB-M1060-3000HO

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±20	nm
CW Optical Output Power	P_{op}	3	W
Operation Current	I_{op}	<4	A
Operation Voltage	U_{ld}	1.5±0.2	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Thermistor			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree

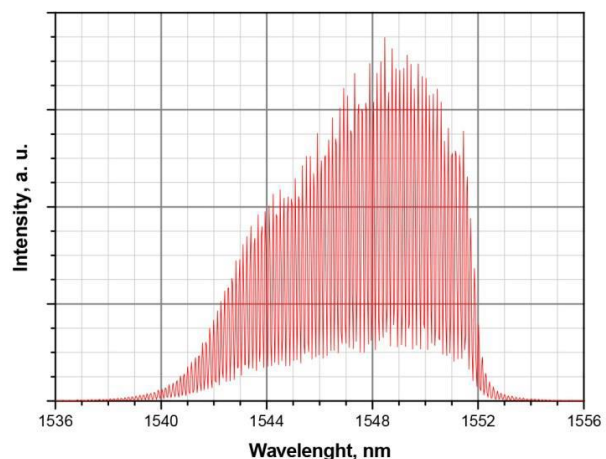
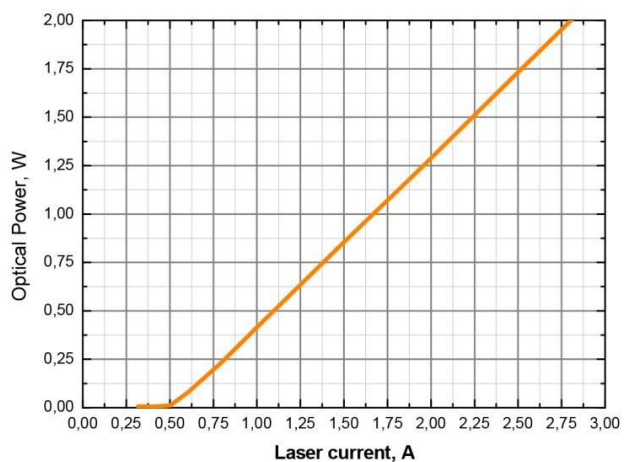


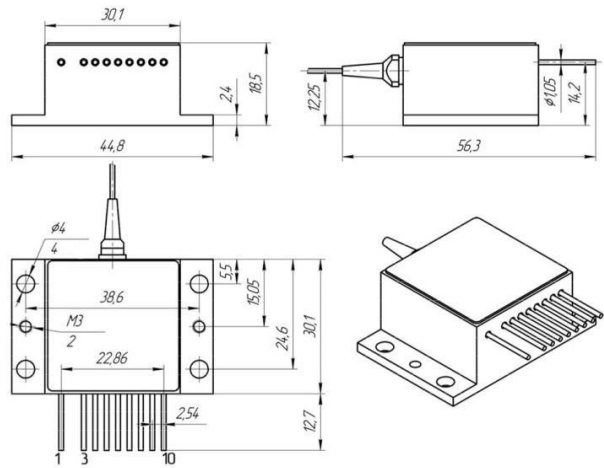
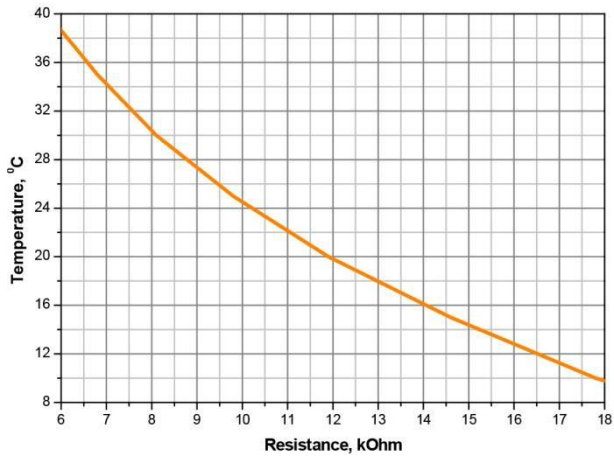
- 1- TEC (-)
- 2-
- 3-
- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Output window of 0.5 mm in thickness

Laser Diode (HHL w/fiber package)
Model FB-M1060-3000HF

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±15	nm
CW Optical Output Power	P_{op}	3	W
Operation Current	I_{op}	<4	A
Operation Voltage	U_{ld}	1.5±0.2	V
Threshold Current	I_{th}	<0.6	A
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Operating Mode		CW, QCW, pulse d	
Optical Fiber			
Fiber diameter		100	μm
Coating Diameter		125	μm
Outer Diameter		3	mm
Numerical Aperture		0.22	-
Emitting Area Fiber Length		1	m
Optical Connector Type		FC	-
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Other parameters			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Guaranteed Life Time		1	year





Fibercom LTD., Address: 2-nd Hutorskaya Str., 19, bld.2, Moscow, 127287, Russia Tel./Fax: +7 495 1070578, E-mail: zakaz@fbcom.ru, WEB: <http://fbcom.ru>

1-TEC (-)

2-

3-

4- Laser Anode(+)

5- Thermistor (2)

6- Thermistor (1)

7- Laser Cathode (-)

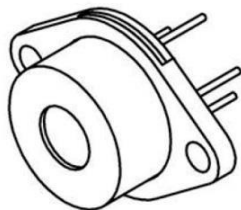
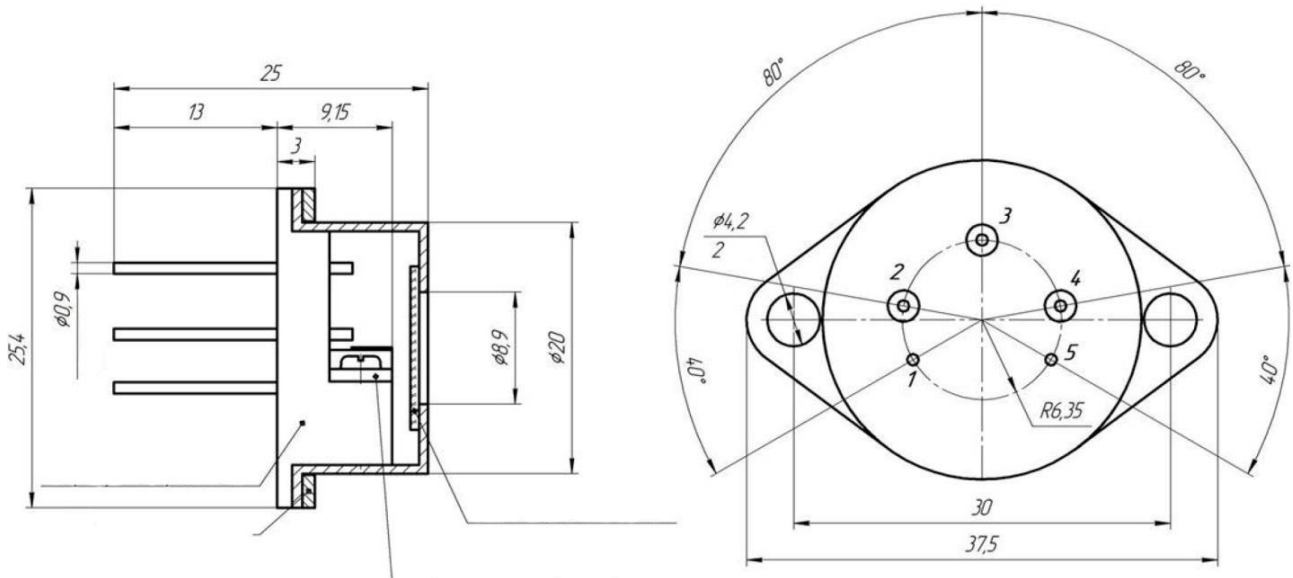
8- PD Anode (+)

9- PD Cathode (-)

10- TEC (+)

Laser Diode (TO-3 package)
Model FB-M1060-3000TO3

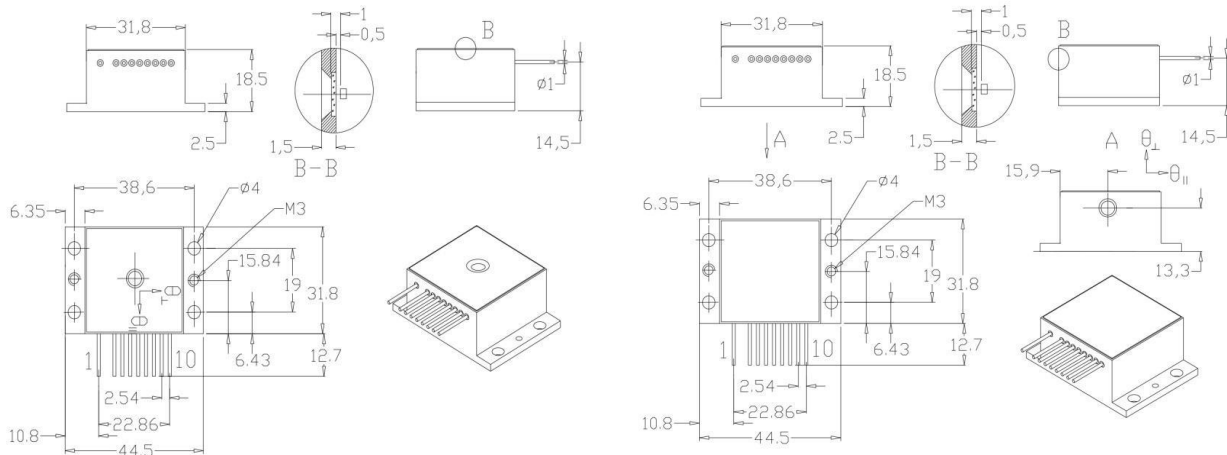
Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±20	nm
CW Optical Output Power	Pop	3	W
Operation Current	Iop	<4	A
Operation Voltage	Uld	1.5±0.2	V
Threshold Current	Ith	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	Wxd	100x1	$\mu\text{m}\times\mu\text{m}$
Operating Mode	CW	continuous	
Operating Temperature	Top	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



1	«+»
2	«-»
3	
4	«-»
5	«+»

Laser Diode (HHL w/window package)
Model FB-M1260-0500HO

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1060±20	nm
CW Optical Output Power	P_{op}	0.5	W
Operation Current	I_{op}	<2.75	A
Operation Voltage	U_{ld}	1.2±0.2	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Thermistor			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



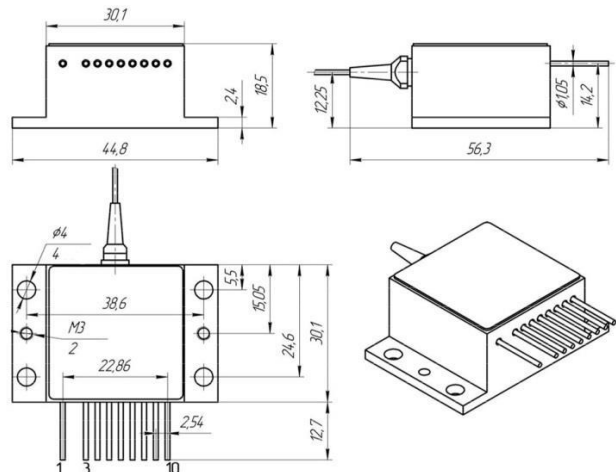
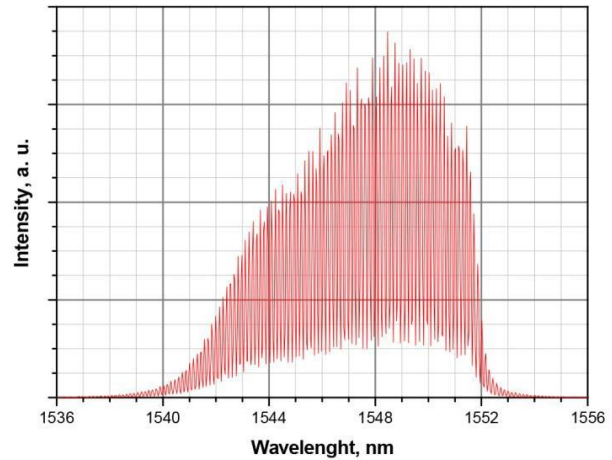
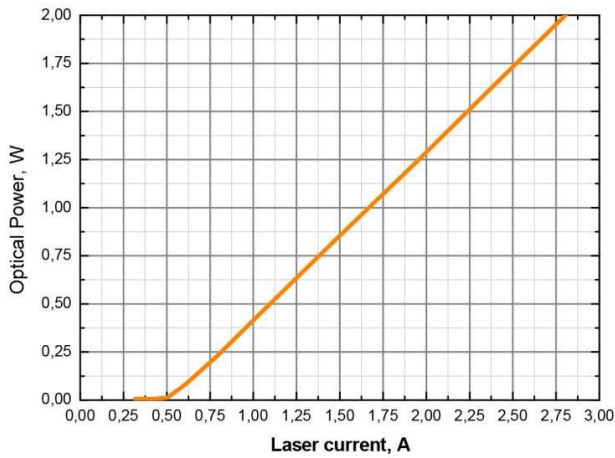
- 1- TEC (-)
- 2-
- 3-
- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Output window of 0.5 mm in thickness

Laser Diode (HHL w/fiber package)
Model FB-M1260-0500HF

Specification	Symbol	Typical	Unit
Laser Emitter			

Peak Wavelength	λ_{op}	1260±20	nm
CW Optical Output Power	P_{op}	0.5	W
Operation Current	I_{op}	<2.75	A
Operation Voltage	U_{ld}	1.2±0.2	V
Threshold Current	I_{th}	<0.6	A
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Operating Mode		CW	
Optical Fiber			
Fiber diameter		100	μm
Coating Diameter		125	μm
Outer Diameter		3	mm
Numerical Aperture		0.22	-
Emitting Area Fiber Length		1	m
Optical Connector Type		FC	-
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Other parameters			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Guaranteed Life Time		1	year

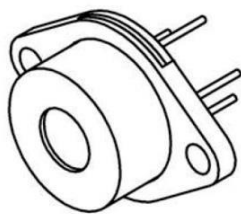
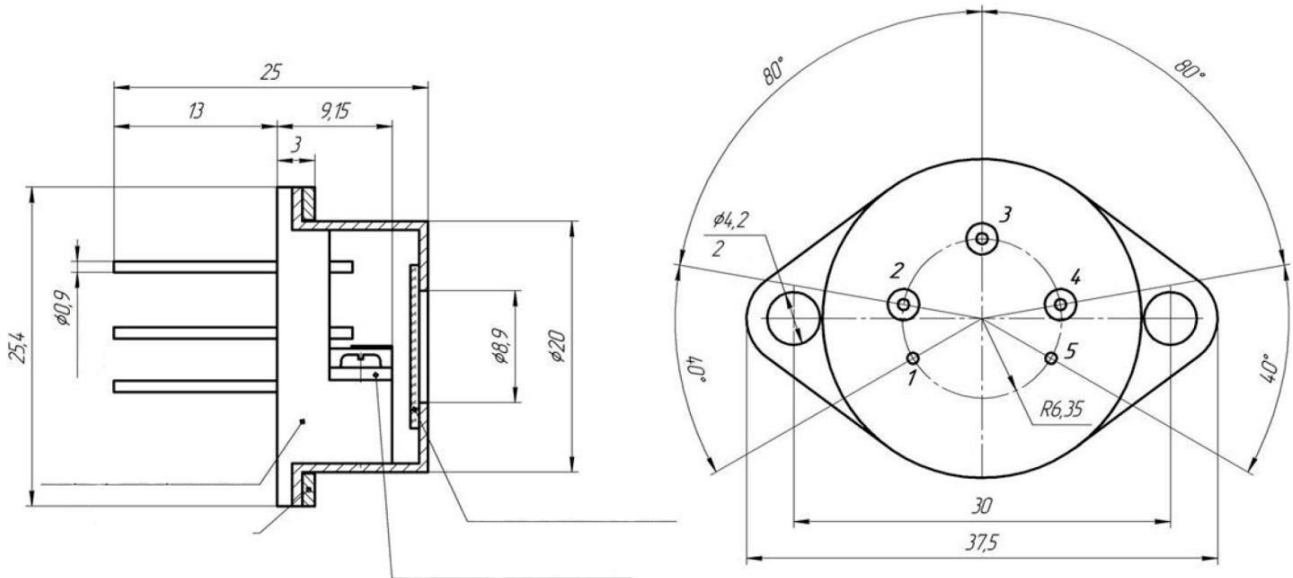


- 1-TEC (-)
- 2-
- 3-

- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Laser Diode (TO-3 package)
Model FB-M1260-0500TO3

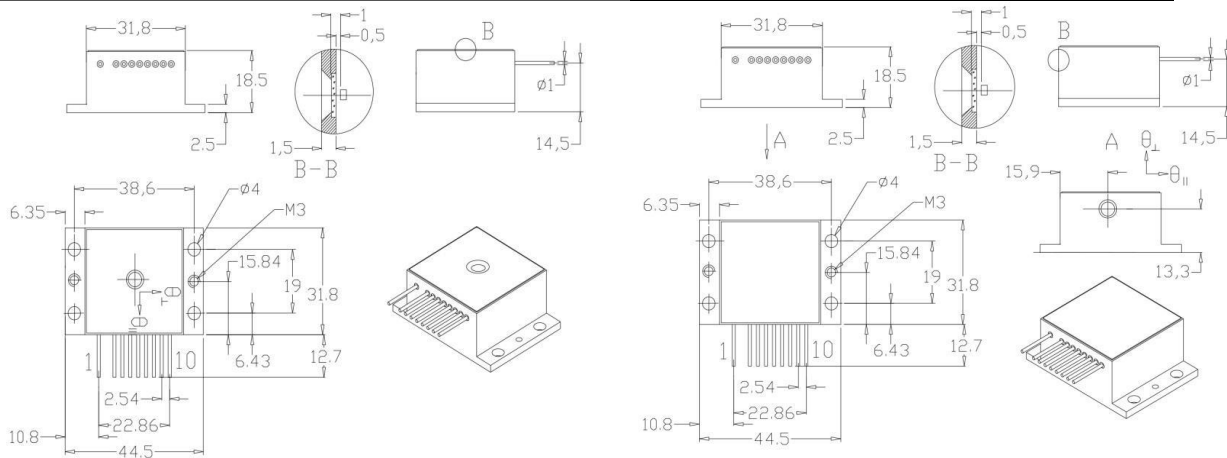
Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1260±20	nm
CW Optical Output Power	P_{op}	0.5	W
Operation Current	I_{op}	<2.75	A
Operation Voltage	U_{ld}	1.25±0.2	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



1	«+»
2	«-»
3	
4	«-»
5	«+»

Laser Diode (HHL w/window package)
Model FB-M1470-1000HO

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1470±20	nm
CW Optical Output Power	P_{op}	1	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1.1±0.1	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	<15	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Thermistor			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



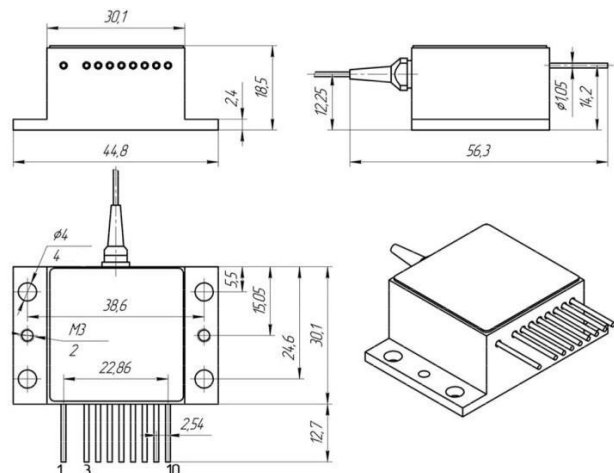
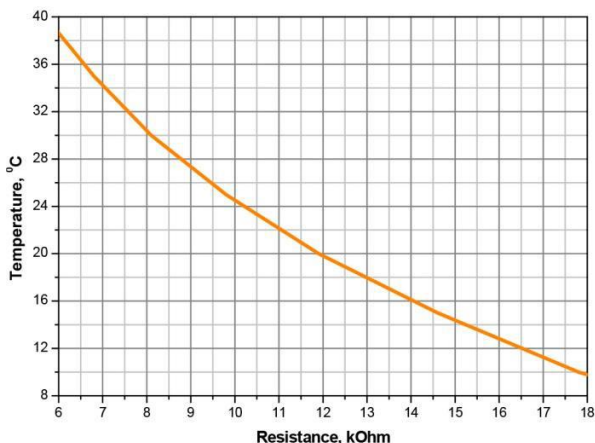
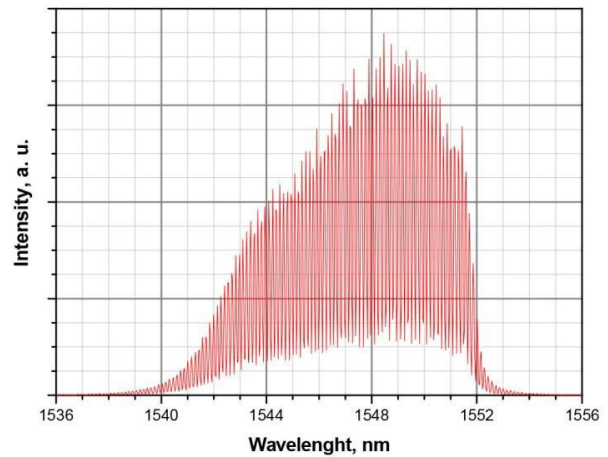
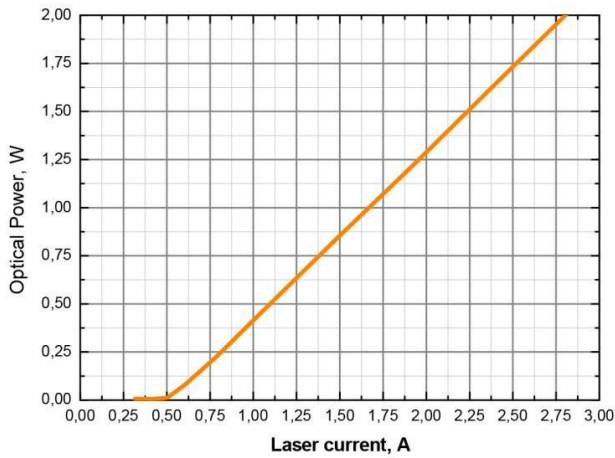
- 1-TEC (-)
- 2-
- 3-
- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Output window of 0.25 mm in thickness

Laser Diode (HHL w/fiber package)
Model FB-M1470-1500HF

Specification	Symbol	Typical	Unit
Laser Emitter			

Peak Wavelength	λ_{op}	1470±20	nm
CW Optical Output Power	P_{op}	1	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1.1±0.1	V
Threshold Current	I_{th}	<0.6	A
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Operating Mode		CW	
Optical Fiber			
Fiber diameter		100	μm
Coating Diameter		125	μm
Outer Diameter		3	mm
Numerical Aperture		0.22	-
Emitting Area Fiber Length		1	m
Optical Connector Type		FC	-
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Other parameters			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Guaranteed Life Time		1	year

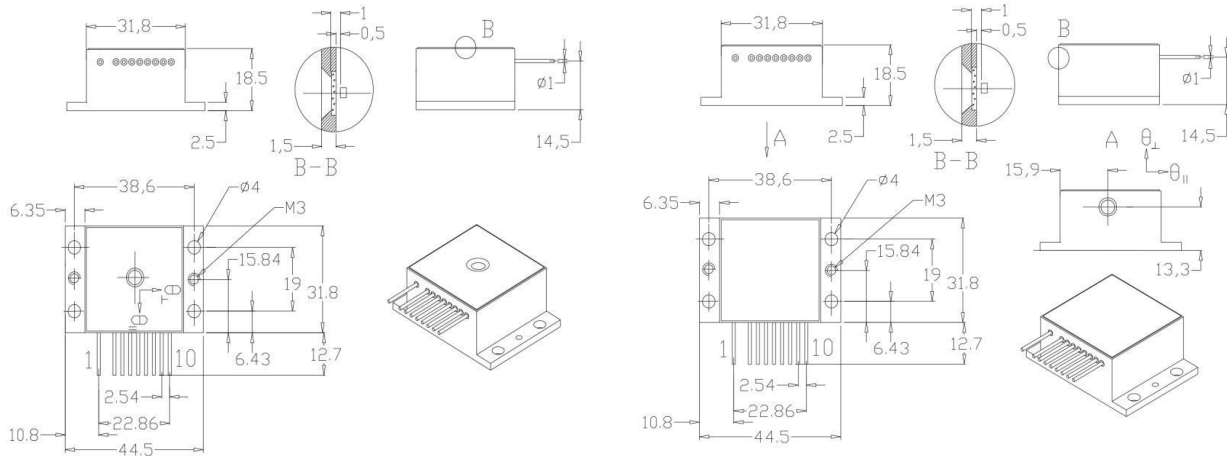


- 1-TEC (-)
- 2-
- 3-

- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Laser Diode (HHL w/window package)
Model FB-M1550-0500HO

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1550±30	nm
CW Optical Output Power	P_{op}	0.5	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1±0.2	V
Threshold Current	I_{th}	<0.7	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Thermistor			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



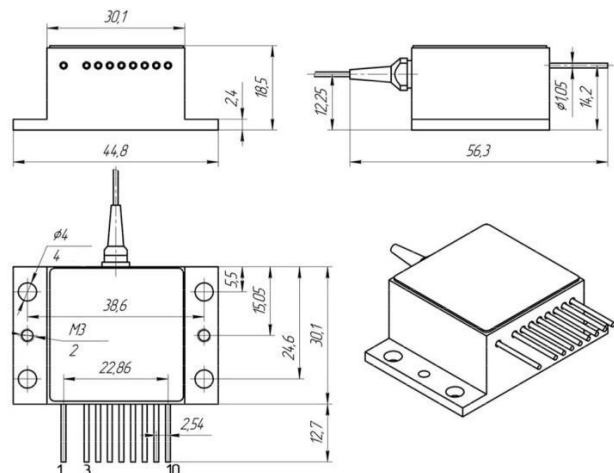
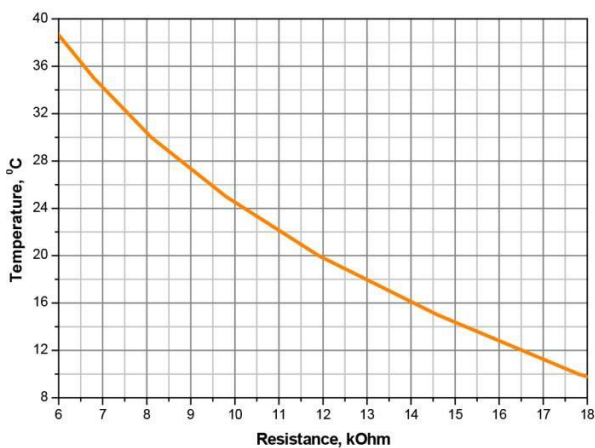
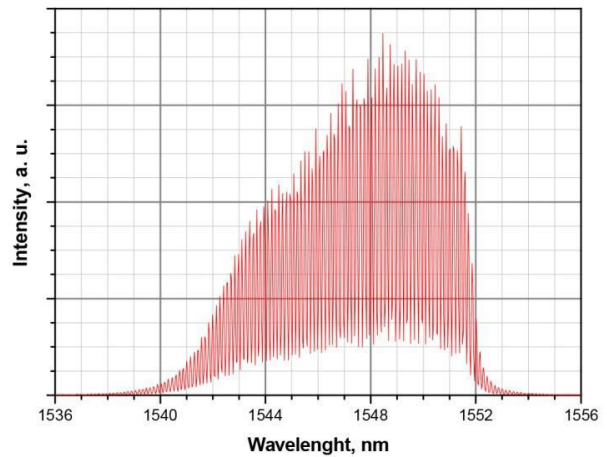
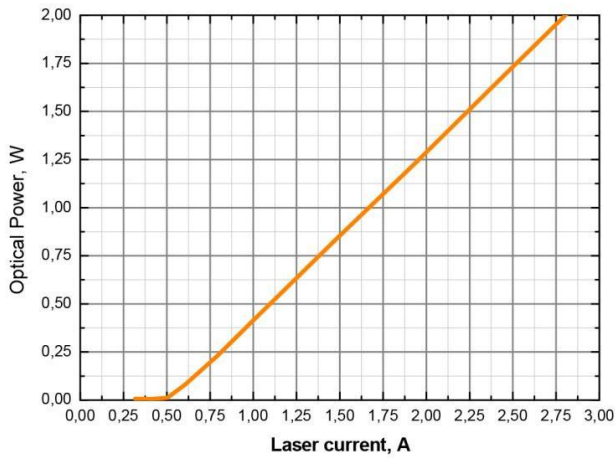
- 1-TEC (-)
- 2-
- 3-
- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Output window of 0.25 mm in thickness

Laser Diode (HHL w/fiber package)
Model FB-M1550-0500HF

Specification	Symbol	Typical	Unit
Laser Emitter			

Peak Wavelength	λ_{op}	1550±30	nm
CW Optical Output Power	P_{op}	0.5	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1±0.2	V
Threshold Current	I_{th}	<0.7	A
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Operating Mode		CW	
Optical Fiber			
Fiber diameter		100	μm
Coating Diameter		125	μm
Outer Diameter		3	mm
Numerical Aperture		0.22	-
Emitting Area Fiber Length		1	m
Optical Connector Type		FC	-
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Other parameters			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Guaranteed Life Time		1	year

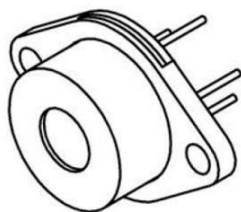
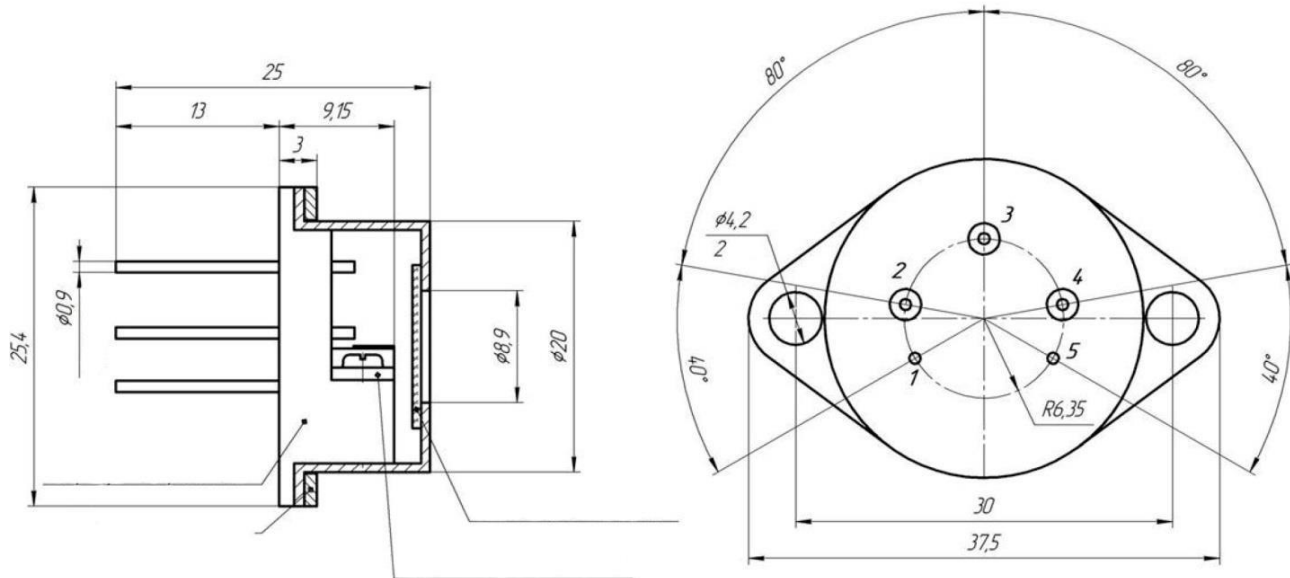


- 1-TEC (-)
- 2-
- 3-

- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Laser Diode (TO-3 package)
Model FB-M1550-0500TO3

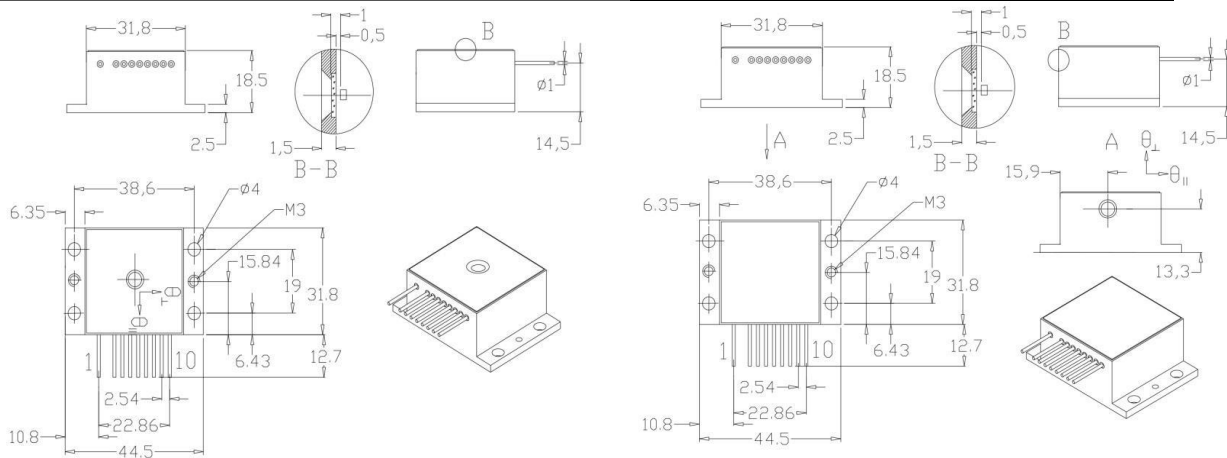
Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1550±20	nm
CW Optical Output Power	P_{op}	0.5	W
Operation Current	I_{op}	<3	A
Operation Voltage	U_{ld}	1±0.2	V
Threshold Current	I_{th}	<0.7	A
Beam Divergence (FWHM)	$\theta_{ }$	8±2	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<3.5	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



1	«+»
2	«-»
3	
4	«-»
5	«+»

Laser Diode (HHL w/window package)
Model FB-M1550-2000HO

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1550±30	nm
CW Optical Output Power	P_{op}	2	W
Operation Current	I_{op}	<5	A
Operation Voltage	U_{ld}	1.1±0.1	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	15±3	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<10	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Thermistor			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



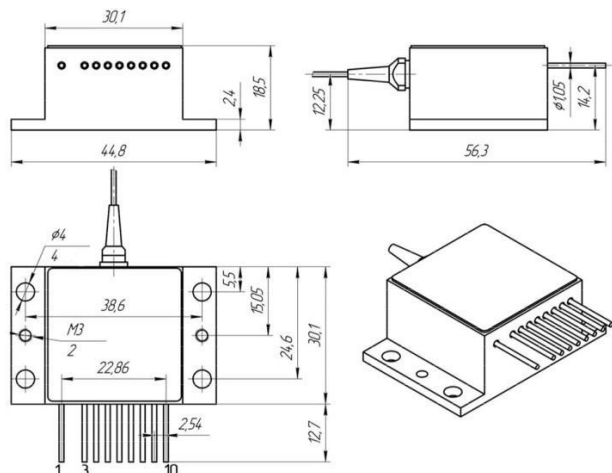
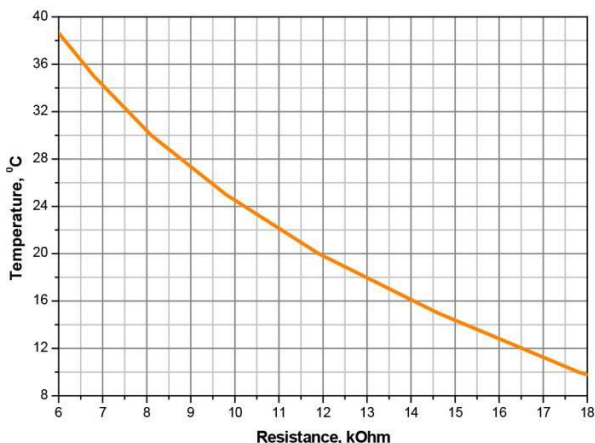
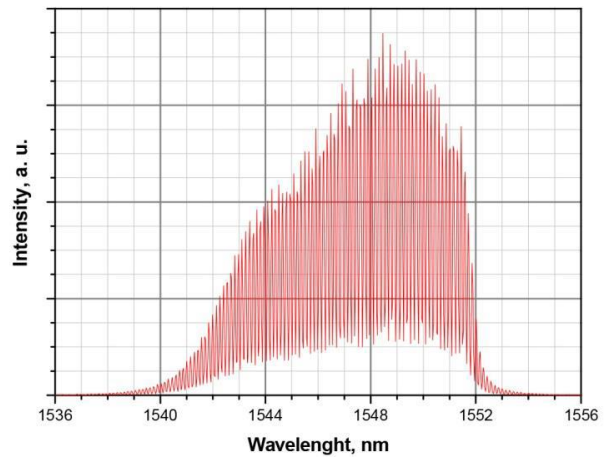
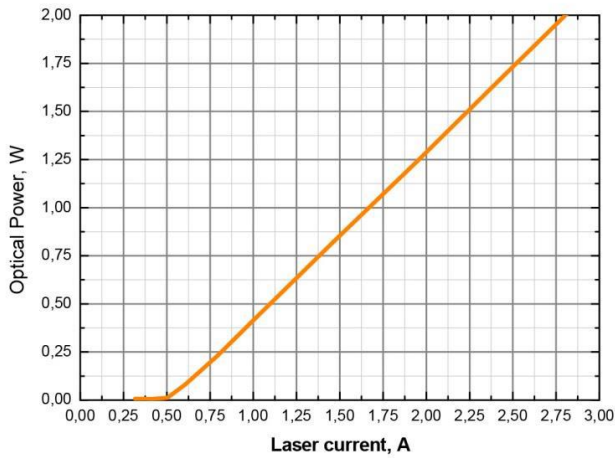
- 1-TEC (-)
- 2-
- 3-
- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Output window of 0.5 mm in thickness

Laser Diode (HHL w/fiber package)
Model FB-M1550-1500HF

Specification	Symbol	Typical	Unit
Laser Emitter			

Peak Wavelength	λ_{op}	1550±30	nm
CW Optical Output Power	P_{op}	1.5	W
Operation Current	I_{op}	<5	A
Operation Voltage	U_{ld}	1.1±0.1	V
Threshold Current	I_{th}	<0.6	A
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<8	nm
Operating Mode		CW	
Optical Fiber			
Fiber diameter		100	μm
Coating Diameter		125	μm
Outer Diameter		3	mm
Numerical Aperture		0.22	-
Emitting Area Fiber Length		1	m
Optical Connector Type		FC	-
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Other parameters			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Guaranteed Life Time		1	year

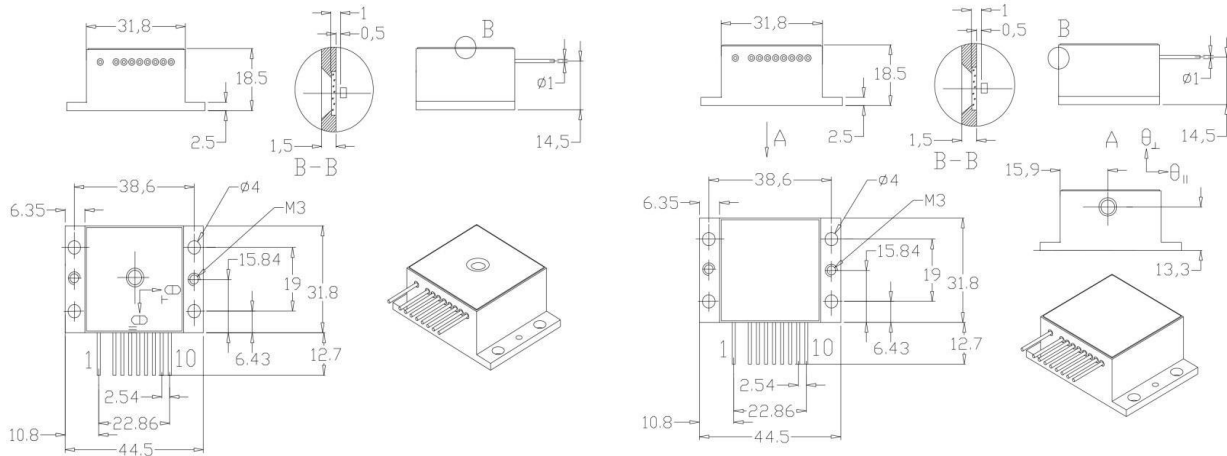


- 1-TEC (-)
- 2-
- 3-

- 4- Laser Anode(+)
- 5- Thermistor (2)
- 6- Thermistor (1)
- 7- Laser Cathode (-)
- 8- PD Anode (+)
- 9- PD Cathode (-)
- 10- TEC (+)

Laser Diode (HHL w/window package)
Model FB-M1600-1000HO

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1600±20	nm
CW Optical Output Power	P_{op}	1	W
Operation Current	I_{op}	<3.5	A
Operation Voltage	U_{ld}	1.2±0.1	V
Threshold Current	I_{th}	<0.6	A
Beam Divergence (FWHM)	$\theta_{ }$	15±3	degree
Beam Divergence (FWHM)	θ_{\perp}	1	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<8	nm
Emitting Area	$W \times d$	100x1	$\mu m \times \mu m$
Operating Mode	CW	continuous	
Operating Temperature	T_{op}	25	degree
Photo Diode Monitor			
PD Monitor Current		1-1000	μA
PD Reverse Voltage		9	V
TEC			
Max Current		5	A
Max Operating Voltage		3,8	V
Thermistor			
Resistance		10	Kilo-ohm
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	nm/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	15±5	mA/degree
Operation Temperature Range		-20... +40	degree
Storage Temperature Range		-40... +80	degree



- 1-TEC (-)
 - 2-
 - 3-
 - 4- Laser Anode(+)
 - 5- Thermistor (2)
 - 6- Thermistor (1)
 - 7- Laser Cathode (-)
 - 8- PD Anode (+)
 - 9- PD Cathode (-)
 - 10- TEC (+)
- Output window of 0.5 mm in thickness