



PRODUCT DATA SHEET

Laser Diode

Model FB-S1170-20SOT148

Specification	Symbol	Typical	Unit
Laser Emitter			
Peak Wavelength	λ_{op}	1170±20	nm
CW Optical Output Power	P_{op}	20	mW
Operation Current	I_{op}	<110	mA
Operation Voltage	U_{ld}	1.3±0.3	V
Threshold Current	I_{th}	<60	mA
Beam Divergence (FWHM)	$\theta_{ }$	10±1	degree
Beam Divergence (FWHM)	θ_{\perp}	30±5	degree
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<5	nm
Emitting Area	$W \times d$	4x1	$\mu\text{m} \times \mu\text{m}$
Wavelength Temperature Coefficient	$\Delta\lambda/\Delta T$	3±0.2	Å/degree
Operation Power Temperature Coefficient	$\Delta P/\Delta T$	0.25±0.05	mW/degree
Operation Current Temperature Coefficient	$\Delta I/\Delta T$	0.3±0.05	mA/degree
Mode Structure	SM	TE ₀₀	-
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.



Drawings:

