

Preliminary Data Sheet SCW 17B7-D50R

1650nm Pulsed DFB Laser Diode Component for OSA / OTDR Applications

Description:

The SCW 17B7-D50R laser diode modules are 1650nm DFB laser diodes packaged in a 3 pin TO56 package with a back-facet detector & window cap. These SCW laser diode modules are specifically designed for optical test equipment applications. The devices are RoHS compliant.



Maximum Ratings ($T_{case} = 25^{\circ} C.$):

Parameter	Symbol	Conditions	Min.	Typ.	Max	Units
Forward current	I_f	$P_w = 10 \text{ us}; D/C = 1\%$			500	mA
Maximum optical power	P_{oMAX}	$P_w = 10 \text{ us}; D/C = 1\%$			80	mW
Monitor max forward current	I_{FMON}	$V_{FPD} = 1V$			3	mA
Monitor max reverse voltage	V_{RMAX}				15	V
Lead soldering temperature	T_s				260	deg C

Characteristics ($T_{case} = 25^{\circ} C.$):

Parameter	Symbol	Conditions	Min.	Typ.	Max	Units
Po (ex-facet) 1650nm	P_o	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$	50			mW
Threshold Current	I_{th}	$P_w = 10 \text{ us}; D/C = 1\%$		42		mA
Forward Voltage	V_f	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$		1.4		V
Reverse Voltage	V_r	$I_R = 10 \text{ uA}$		2		
Center wavelength	λ	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$	1648	1650	1652	nm
Spectral width (RMS)	$\Delta\lambda$	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$		0.5		nm
Monitor current	I_{RMON}	$P_o = 5\text{mW CW}; V_{RPD} = 5V$		5		uA
Monitor dark current	I_D	$V_{RPD} = 5V$		1	20	nA
Rise & Fall time 10% - 90%	T_R / T_F	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$		0.5	1	ns
DQE	S	$I_{th} - 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$		0.18		W/A
Transverse FF Angle (50%)	θ_T	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$		36		deg
Lateral FF Angle (50%)	θ_L	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$		11		deg

Environmental

Operating temp. range	T_{op}	$I_f = 400 \text{ mA}; P_w = 10 \text{ us}; D/C = 1\%$	-40		70	$^{\circ}C$
Storage temp. range	T_{stg}	Non operating	-40		85	$^{\circ}C$

PIN OUT	FUNCTION
1	LD Cathode
2	GND / LD Anode / BFM Cathode
3	BFM Anode

