



FEATURES

- InGaAsP/InP-IRED
- Emission Wavelength:
2nd Optical Window (1300 nm)
- Suitable for Bit Rates up to 50 Mbit/s
- 200 Mbit/s with Appropriate Pulse
Shaping of Modulation Current
- High Output Power with Double
Heterostructure
- High Coupling Efficiency into a 62.5/125
 μm Graded Index Fiber with Built in
Optics and Appropriate Second Lens
Configuration
- Hermetically Sealed 3-pin Metal Case,
Similar to TO 18, AR-Coated Window
- Application:
 - Fiber Optic Communication System

Maximum Ratings

Forward Current DC (I_F)	60 mA
Forward Current $\tau \leq 10 \mu\text{s}$, $D \leq 1$ (I_{FGM})	100 mA
Reverse Voltage (V_R)	0.5 V
Operating Temperature Range at Case (T_C)	20° to +80°C
Storage Temperature Range (Ambient Temp.) (T_{STG})	40° to +80°C
Junction Temperature (T_J)	125°C
Soldering Time (Wave Soldering), Pin Length 2mm, 260°C (T_{S1})	10 s
Soldering Time (Dip Soldering), Pin Length 2mm, 280°C (T_{S2})	3 s

Characteristics (Output power ratings refers to an optimally coupled 62.5/125 μm GI fiber at $T_A=25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Emission Wavelength (1)	λ_c	1310 \pm 30	nm
Spectral Bandwidth at 50% of Φ_{MAX} (1)	$\Delta\lambda$	130 \pm 30	nm
Radiation Power Coupled into a 62.5/125 μm GI-fiber with Fiber-Lens-Config., NA = 0.275 (1)			
Forward Voltage, $I_F = 50$ mA DC	V_F	1.2	V
Rise and Fall Time (10 to 90%) ($R_L=50 \Omega$, $I_F=50$ mA)	$t_{R,F}$	3.4	ns
Capacitance ($V_R=0$ V, $f=1$ MHz)	C_0	100	pF
Temperature Coefficient of Forward Voltage ($I_F=50$ mA)	TC_{V_F}	1.3	mV/K
Temperature Coefficient of Wavelength ($I_F=50$ mA)	TC_λ	0.5	nm/K
Temperature Coefficient of Radiation Power ($I_F=50$ mA) (1)	$TC_{P_{\text{out}}}$	-0.7	%/K
Thermal Resistance			
Junction/Air	R_{thJA}	400	
Junction/Case	R_{thJC}	150	K/W
Frequency Response (2)	$A_{(60/10)}$	0.80	

Notes

1. Measured with optical system as shown in example (see below). Driving current is a square wave, 50% duty cycle, 60 mA_{PK} current at 1 MHz. Φ_E is the average optical power coupled in the described lens configuration.
2. The diode is driven with 30 mA DC and 60 mA_{PK} sine wave at 10 MHz and 60 MHz, respectively. $A_{(60/10)}$ is the ratio of the coupled-in optical power of 60 MHz and 10 MHz modulation frequency.

OPERATING INSTRUCTIONS

In order to achieve an operating lifetime $>10^5$ h, which is required for Telecom applications, the value listed below should not be exceeded:

Recommended forward current $I_F=50$ mA DC

