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SPECIFICATIONS

1550 nm Edge-Emitting LED

DL-US5084D

DenseLight Semiconductors reserves the right to make product design or specifications changes without notice.

A. PRODUCT DESCRIPTION

The DenseLight DL-US5084D series is an uncooled edge emitting LED in TO-can packaged engineered for optical communication system and test instrument. It operates over a wide temperature range from 0 to 65°C without any needs for a thermoelectric cooler and temperature controller.

For responsive prototyping enquiries please email: info@denselight.com

B. FEATURES

- High coupled power
- Peak wavelength of 1550nm
- 3dB bandwidth of >40nm
- High speed >150MHz
- Operating temperature range 0 to 65°C
- TO-56 with aspherical lens

C. APPLICATIONS

- Optical Communication system
- Optical Test Instrument
- Fiber Optic Sensors

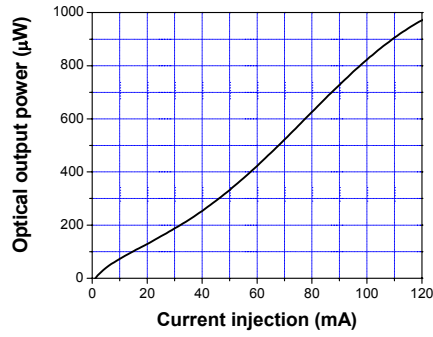
D. ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Min	Max	Unit
Reverse voltage	V_R			2	V
Forward current	I_F			180	mA
Forward voltage	V_F	I_{op}		2.5	V
Case temperature	T_C	I_{op}	0	65	°C
Storage temperature	T_{stg}	Unbiased	-40	85	°C
Electro static discharge (ESD)	V_{ESD}	Human body model		500	V
Lead soldering temperature	S_{temp}			260	°C
Lead soldering time	S_{time}			10	sec

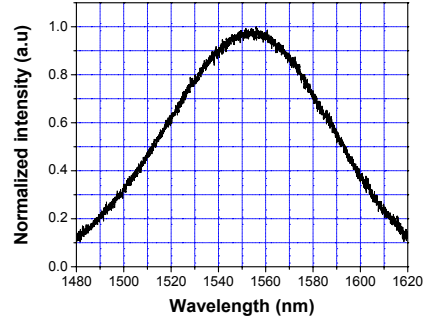
E. SPECIFICATIONS ($T_C = 25\text{ °C}$)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Operating current	I_{op}				120	mA
Forward voltage	V_F	I_{op}			2	V
Optical power	P_o	I_{op}	800			μW
Peak wavelength	λ_p	I_{op}	1520	1550	1580	nm
3dB Bandwidth	B_{FWHM}	I_{op}	40			nm
Cut off frequency	f_c	$I_{op} = 100\text{mA}$ $\pm 20\text{mA}_{p-p}$	150			MHz

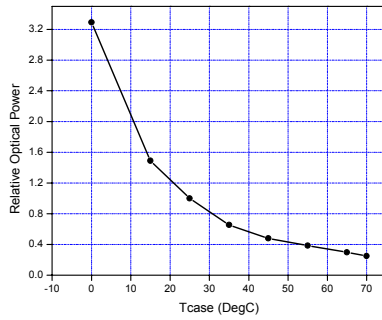
F. TYPICAL PERFORMANCE CHARACTERISTICS



P-I Curve ($T_c=25\text{ }^\circ\text{C}$)

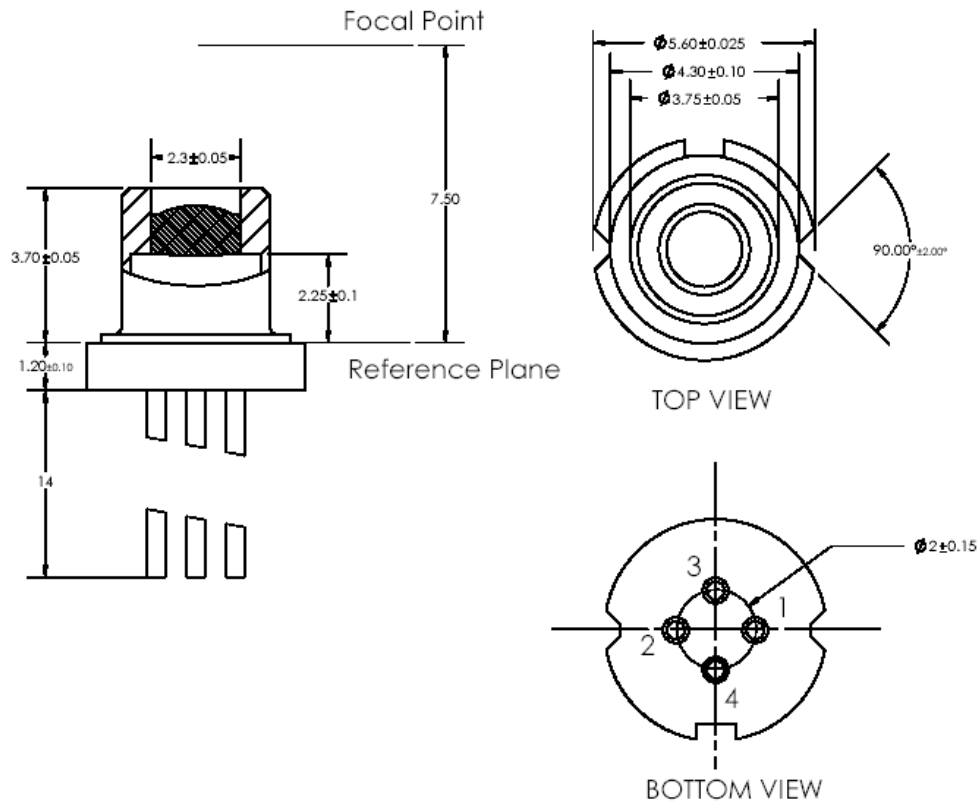


Spontaneous Emission Spectrum ($T_c=25\text{ }^\circ\text{C}$)



Temperature Dependence of Optical Power

G. TYPICAL PERFORMANCE CHARACTERISTICS



Pin Assignment	Description
1	SLED Anode
2	SLED Cathode
3	NC
4	Case