

DENSELIGHT SEMICONDUCTORS PTE. LTD.
6 Changi North St. 2, S498831 SINGAPORE
Tel: (65) 64154488
Fax: (65) 64157988
www.denselight.com

SPECIFICATIONS

1550 nm Edge-Emitting LED

DL-US55036D-FS

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

A. PRODUCT DESCRIPTION

The DenseLight DL-US55036D-FS series is a 1550nm uncooled SLED packaged in TO-56 single mode fiber pigtail. It operates over a wide temperature range from 0 to 65 °C.

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

B. FEATURES

- Ex-fiber output power of $>250\mu\text{W}$ @ 25 °C
- Center wavelength of 1550nm
- 3dB bandwidth of $>50\text{nm}$
- TO-56 pigtail package
- Single mode fiber output
- Operating temperature range 0 to 65 °C

C. ABSOLUTE MAXIMUM RATINGS

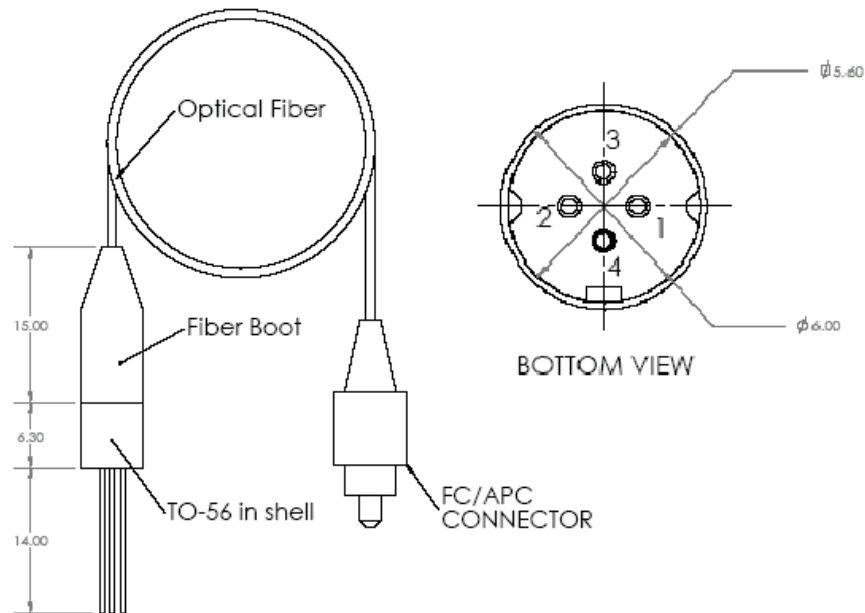
Parameter	Symbol	Condition	Min	Max	Unit
Reverse voltage	V_R			2	V
Forward voltage	V_F	I_{op}		2.5	V
Forward current	I_F	CW		180	mA
Case temperature	T_c	I_{op}	0	65	°C
Storage temperature	T_{stg}	Unbiased	-40	85	°C
Storage humidity			5	85	%RH
Electro static discharge (ESD)	V_{ESD}	Human body model		500	V
Lead soldering temperature	S_{temp}			260	°C
Lead soldering time	S_{time}			10	sec

D. SPECIFICATIONS ($T_c = 25\text{ °C}$)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward voltage	V_F	I_{op}			2	V
Operating current	I_{op}	CW			120	mA
Optical output power	P_o	I_{op}	250			μ W
Center wavelength	λ_c	I_{op}	1520	1550	1580	nm
Cut off frequency	f_c	$I_{op} = 100\text{mA}$ $\pm 20\text{mA}_{p-p}$	150			MHz

E. PACKAGE

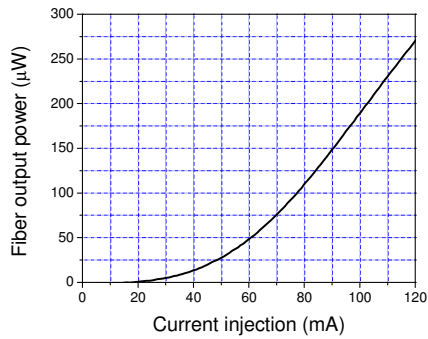
Part	Description
Package type	TO-56
Fiber:	SMF-28
MFD	9 μ m
Cladding diameter	125 μ m
Coating diameter	245 μ m
Jacket	900 μ m loose tube
Fiber pigtail length	1m
Fiber bending radius	>40mm
Connector	FC/APC
Dimensions	See figure



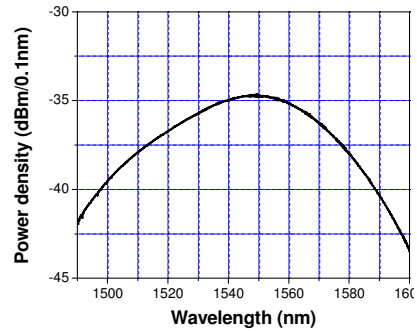
Pin Assignment	Description
1	SLED Anode
2	SLED Cathode
3	NC
4	Case

F. TYPICAL PERFORMANCE CHARACTERISTICS

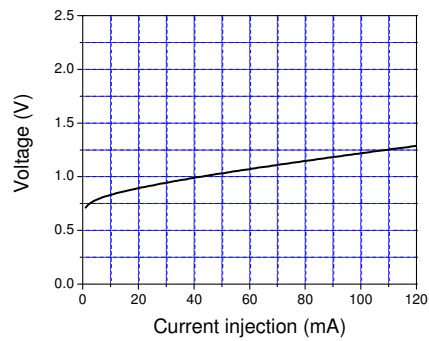
Operating condition: $T_C = 25\text{ }^\circ\text{C}$



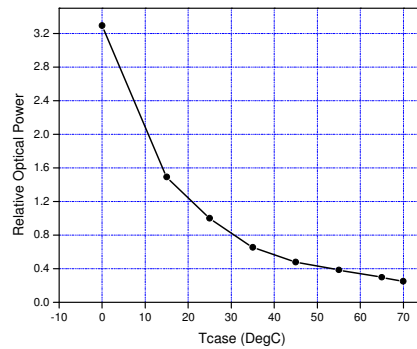
P-I Curve



Spontaneous Emission Spectrum



I-V Curve



Temperature Dependence of Optical Power