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## **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](mailto:info@denselight.com)

## **B. FEATURES**

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

## C. ABSOLUTE MAXIMUM RATINGS

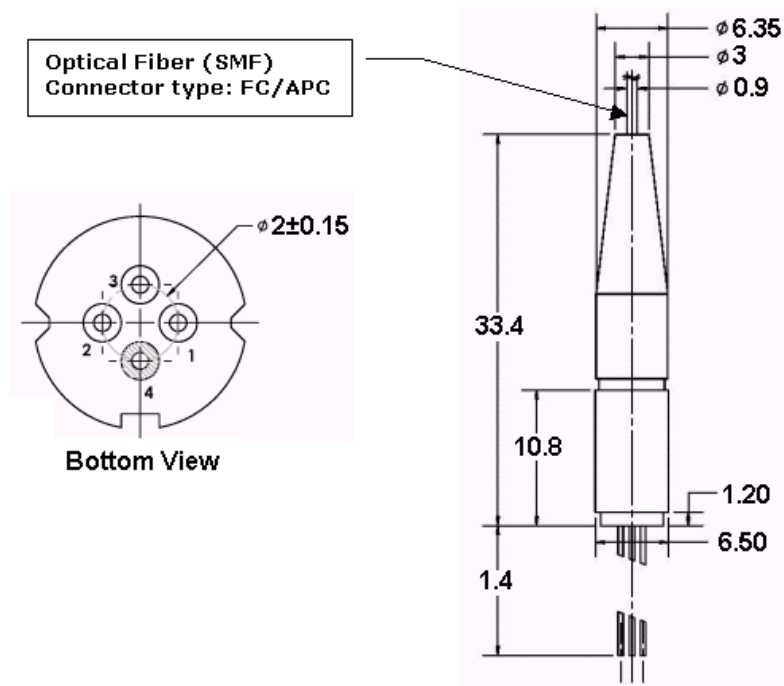
Parameter	Symbol	Condition	Min	Max	Unit
Reverse voltage	$V_R$			2	V
Forward voltage	$V_F$	$I_{op}$		2.5	V
Forward current	$I_F$	CW		180	mA
Case temperature	$T_C$	$I_{op}$	0	65	°C
Storage temperature	$T_{stg}$	Unbiased	-40	85	°C
Storage humidity			5	85	%RH
Electro static discharge (ESD)	$V_{ESD}$	Human 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			$\mu W$
Center wavelength	$\lambda_c$	$I_{op}$	1520	1550	1580	nm

## E. PACKAGE

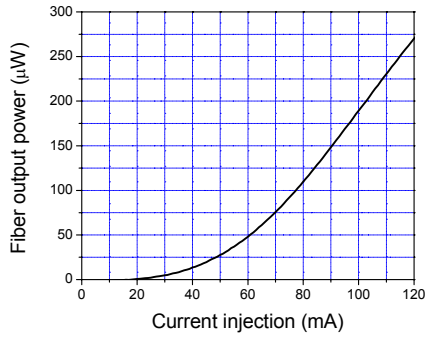
Part	Description
Package type	TO-56
Fiber:	SMF-28
MFD	9 $\mu$ m
Cladding diameter	125 $\mu$ m
Coating diameter	245 $\mu$ m
Jacket	900 $\mu$ m loose tube
Fiber pigtail length	1m
Fiber bending radius	>40mm
Connector	FC/APC
Dimensions	See figure



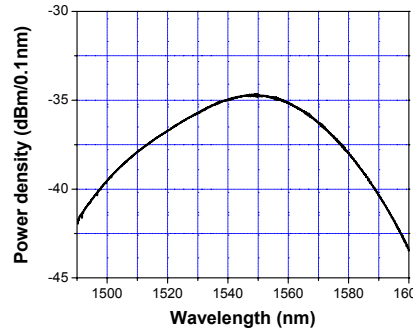
Pin Assignment	Description
1	SLED Anode
2	SLED Cathode
3	NC
4	Case

## F. TYPICAL PERFORMANCE CHARACTERISTICS

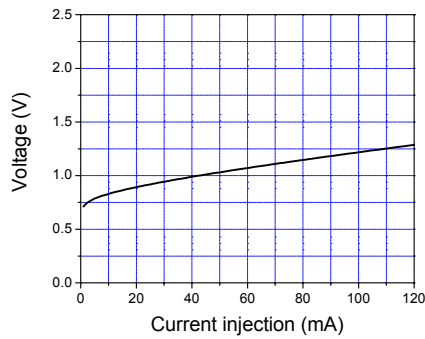
Operating condition:  $T_C = 25\text{ }^\circ\text{C}$



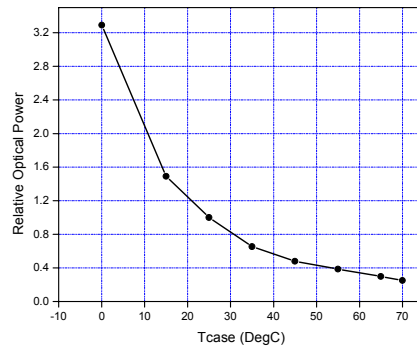
**P-I Curve**



**Spontaneous Emission Spectrum**



**I-V Curve**



**Temperature Dependence of Optical Power**