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SPECIFICATIONS

1305nm ELED Chip on Submount

DL-US3104H-A9-100

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

A. PRODUCT DESCRIPTION

The DenseLight DL-US3104H-A9-100 is a Chip on Submount Edge-emitting LED for uncooled operating of 0 to 70°C when packaged into a hermetically sealed package.

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

B. FEATURES

- Optical output power >1mW @25°C
- Center Wavelength 1305nm @25°C
- 3dB bandwidth of > 40 @25°C
- Spectral ripple of <0.6 dB @25°C

C. APPLICATIONS

- Optical Test Instrument
- Fiber Optic Sensors
- Fiber Optic Communications

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D. ABSOLUTE MAXIMUM RATINGS

Stresses beyond the absolute maximum ratings may cause permanent damage to the device. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Parameter	Symbol	Condition	Min	Max	Unit
Reverse voltage	V_R	-	-	2	V
Forward current	I_F	-	-	150	mA
Heat sink temperature	T_{HS}	Hermetically sealed	0	70	°C
Storage temperature	T_{stg}	Hermetically sealed	-40	85	°C
Storage humidity	-	Hermetically sealed	5	85	%RH
Electro static discharge (ESD)	V_{ESD}	Human body model	-	500	V
Wirebonding/ CoS soldering temperature	S_{temp}	-	-	260	°C
Soldering time	S_{time}	-	-	10	sec

Note:

¹ELED operating temperature and relative humidity should be chosen such that the dew point of humid air around the ELED is below the operating heat sink temperature to avoid condensing of water on the ELED facet.

² Hermetic packaging during operation and humidity control below dew point is required to ensure reliability and to prevent degradation.

³ T_{ELED} is monitored by thermistor attached on TEC cooled heat sink.

E. SPECIFICATIONS ($T_{HS}^{(1)} = 25\text{ °C}$)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Operating current	I_{op}	-	-	-	100	mA
Output optical power ⁽²⁾	P_o	I_{op}	1	-	-	mW
Forward voltage	V_F	I_{op}	-	1.5	2	V
Central wavelength	λ_c	P_o	1280	1305	1330	nm
Bandwidth	B_{FWHM}	I_{op}	40	-	-	nm
Spectrum modulation	R	I_{op}	-	-	0.6	dB
Vertical divergence angle	FFV_{FWHM}	I_{op}	-	-	42	Deg
Horizontal divergence angle	FFH_{FWHM}	I_{op}	-	-	42	Deg

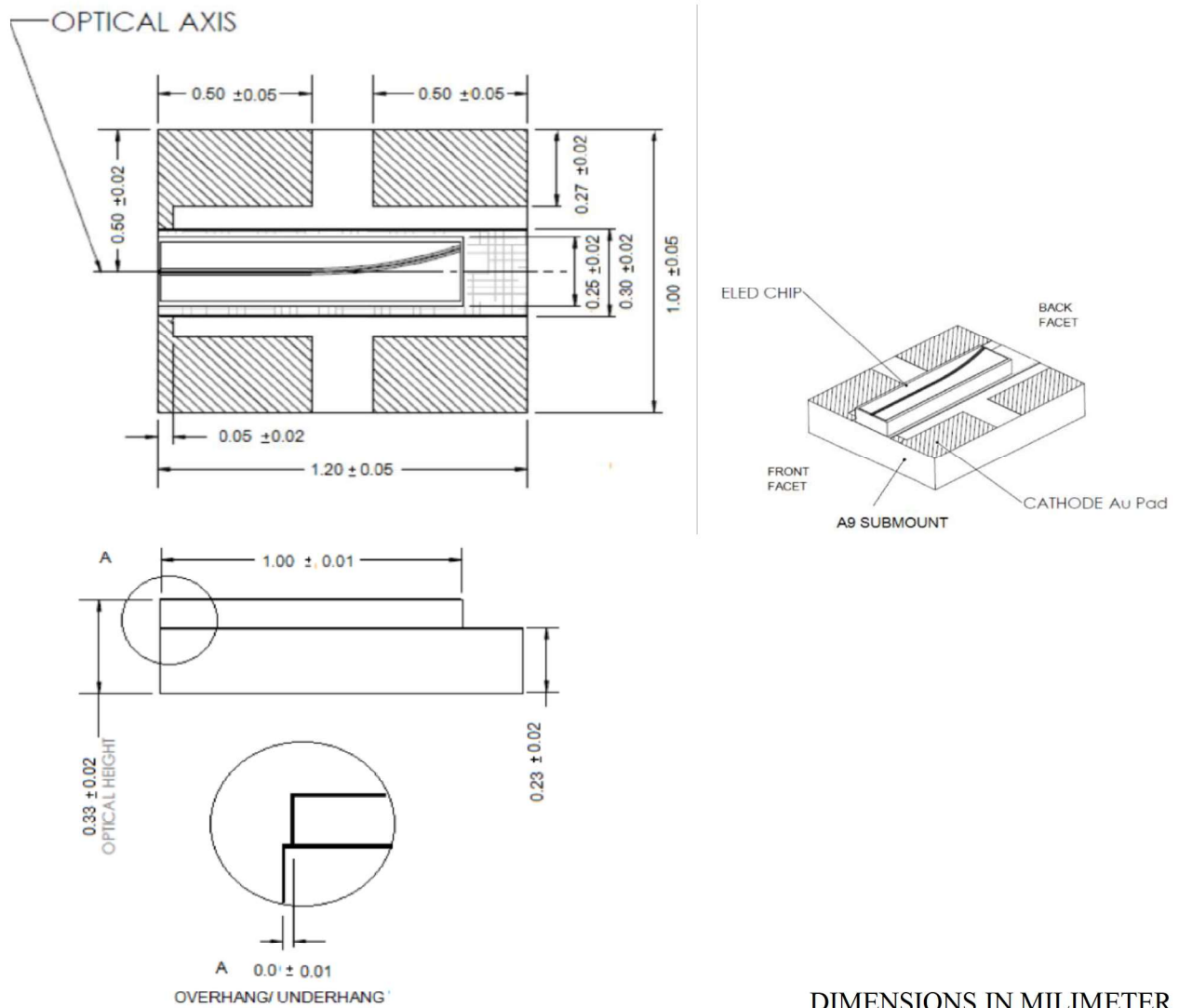
¹ Temperature is measured by thermistor placed on the heatsink where the CoS is placed during testing.

² Refer to section G for typical power characteristics over temperature variation of heatsink.

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F. PACKAGE

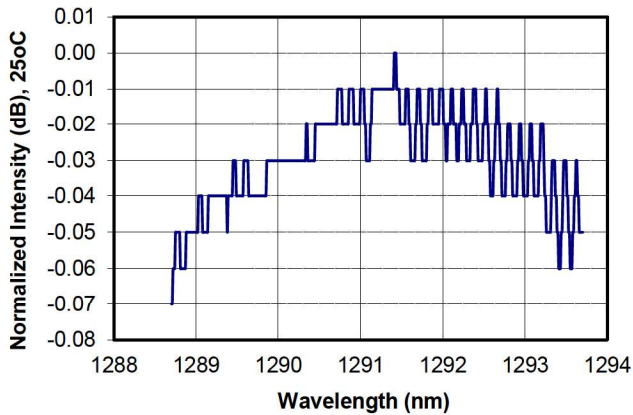
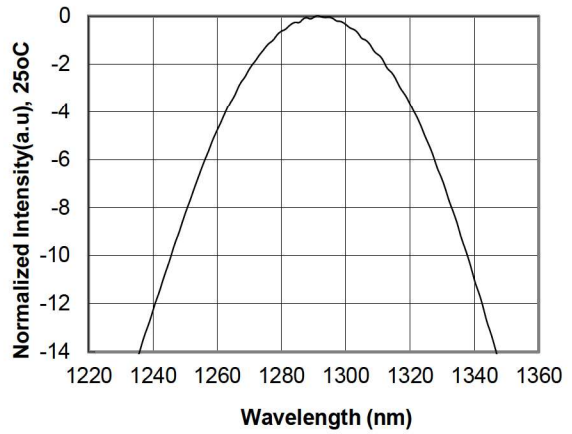
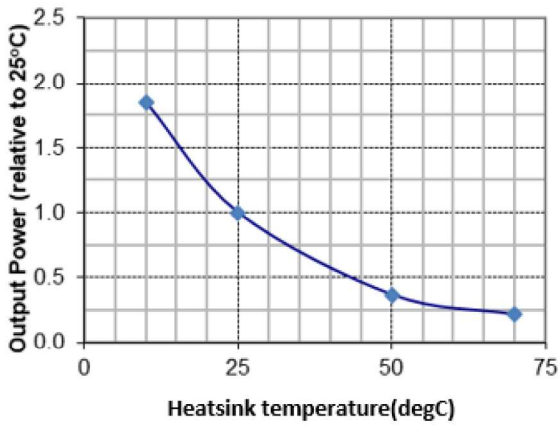
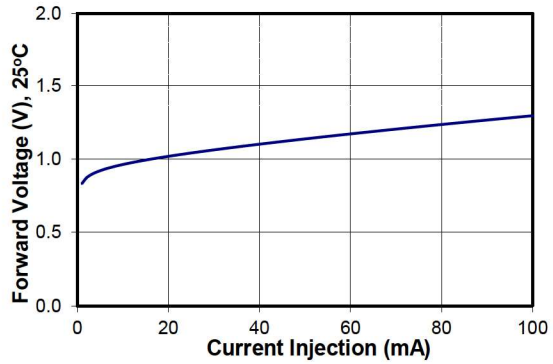
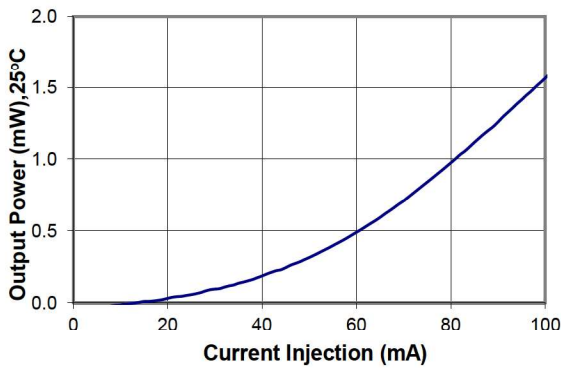


DIMENSIONS IN MILLIMETER

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G. TYPICAL PERFORMANCE CHARACTERISTICS



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