

940nm VCSEL with back-monitor photodiode on MPD on TO-46 can

PN: K0-0940M-0000-00092

Applications:

- Sensors
- Self-mixing

Absolute Maximum Ratings

Parameter	Rating	Notes
Storage temperature	20°C to 50°C	
Operating temperature (VCSEL)	TBD	
Lead solder temperature	260°C, 10 seconds	
CW current (VCSEL)	5 mA	(Note 1)
Laser reverse voltage	5 V	(Note 2)

Note 1: The maximum CW laser current in the Absolute Maximum Ratings is valid for the operating temperature noted at the table above. The maximum CW laser current decreases with increasing temperature. Contact Vixar for maximum CW laser current values at other temperatures.

Note 2: For details refer to the Vixar Application Note "VCSEL EOS/ESD Considerations and Lifetime Optimization".

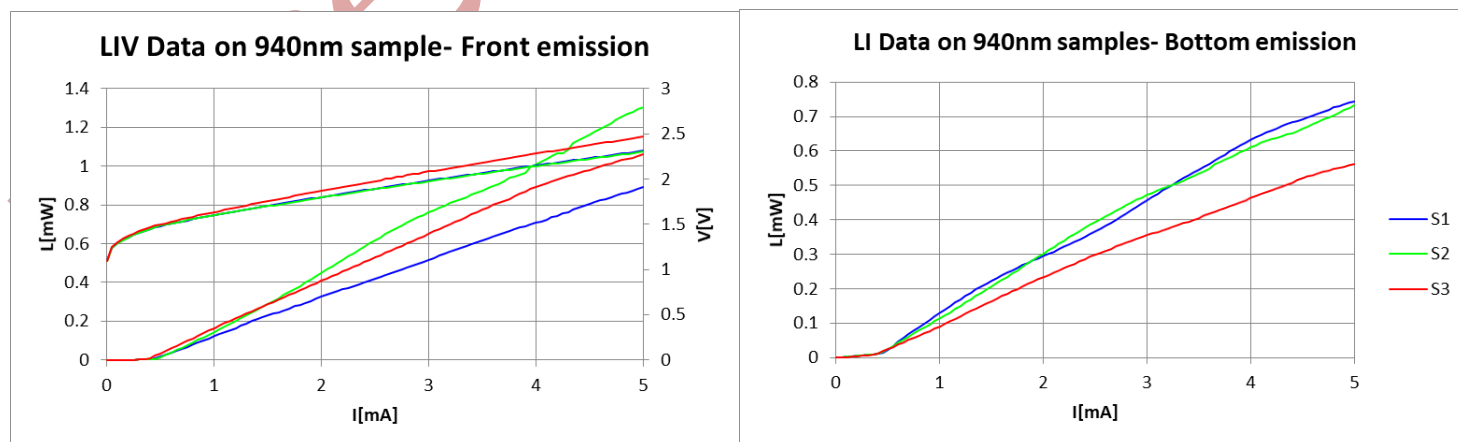
Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. These are stress ratings only. Functional operation of the device at these or any other conditions beyond those indicated for extended periods of time may affect device reliability.

Electro-Optical Characteristics

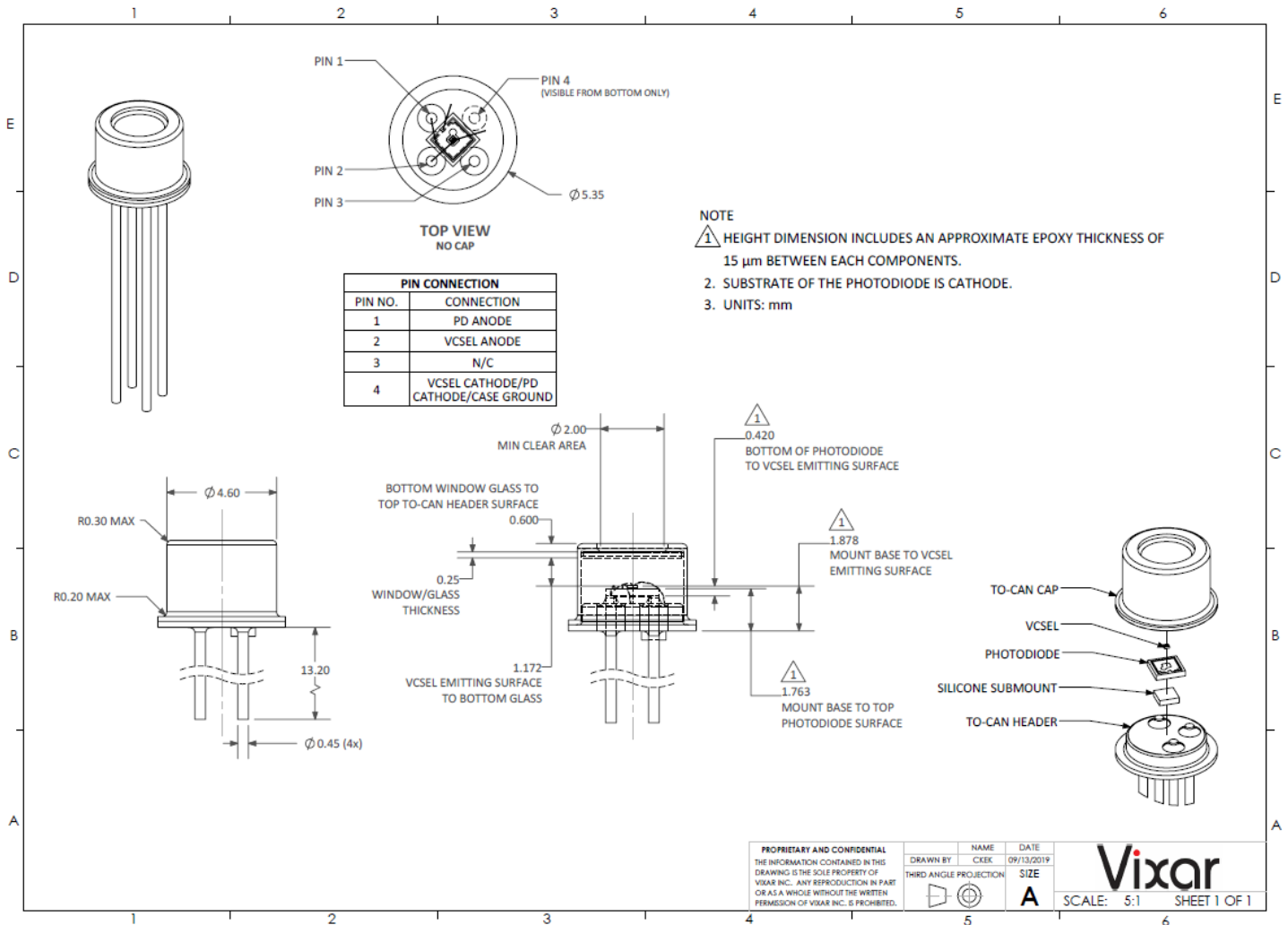
VCSEL Operating Temp (T_v) = 30°C & Operating Current = 3mA unless otherwise stated)

Parameter	Symbol	Units	Minimum	Typical	Maximum	Notes
Threshold current	I_{th}	mA	--	0.5	--	
Operating voltage	V_f	Volts	--	2.0	--	
Series resistance (VCSEL)	R_s	Ohms	--	300	--	
Front Optical output power	L_{op}	mW	--	0.7	--	
Back Optical output power	L_{op}	mW	--	0.3	--	
Operating wavelength	λ_{op}	nm	930	940	950	

TYPICAL PERFORMANCE CURVES:



PACKAGE DRAWING:



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		CCEK	09/13/2019
	THIRD ANGLE PROJECTION	SIZE	
		A	
			SCALE: 5:1 SHEET 1 OF 1

Note: Substrate of the MPD is cathode.

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