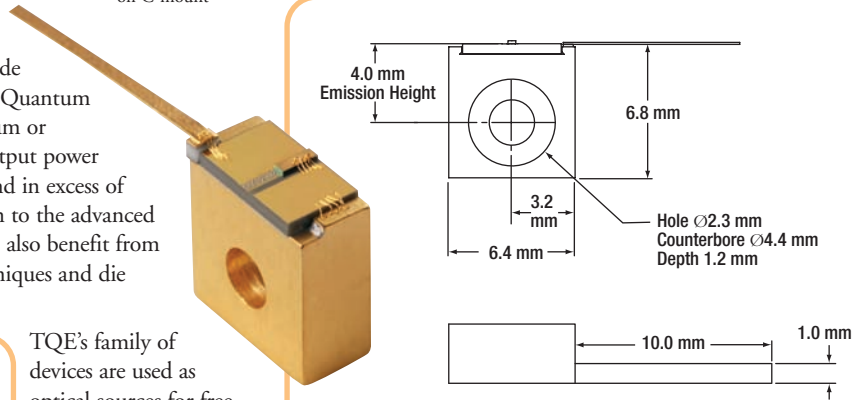


## 3 W Broad-Area Lasers

Thorlabs offers two IR Broad-Area Lasers. The Broad-Area Laser products from Thorlabs Quantum Electronics (TQE) are reliable Fabry-Perot (FP) laser diodes based on a high-power InP ridge waveguide device design, combined with a Multiple Quantum Well (MQW) chip optimized for 1.208  $\mu\text{m}$  or 1.4  $\mu\text{m}$ . Product features include high output power in excess of 1.8 W for the 1.4  $\mu\text{m}$  chip and in excess of 2.5 W for the 1.208  $\mu\text{m}$  chip. In addition to the advanced ridge waveguide technology, these devices also benefit from the advanced epitaxial wafer growth techniques and die bonding processes.

**NEW**  
products

**BAL1112CM**  
Broad-Area Laser  
on C-mount



### Features

- 100  $\mu\text{m}$  Strip Width
- High Power CW Operation
  - 3 W @ 1.208  $\mu\text{m}$
  - 2 W @ 1.4  $\mu\text{m}$
- Available as Chip on C-Mount

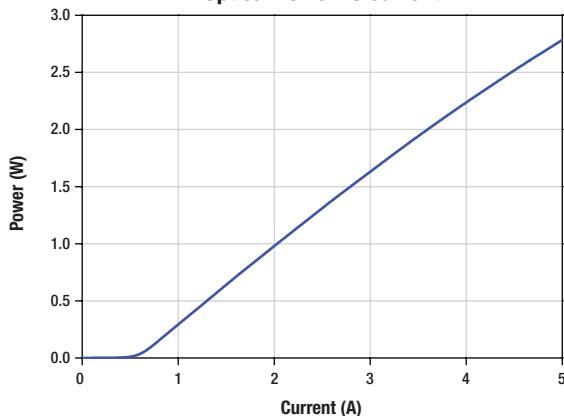
TQE's family of devices are used as optical sources for free-space optical wireless systems and as laser transmitters for eye-safe remote sensing applications. Additional packaging options such as fiber-pigtailed TO cans, butterfly packaging, chip on TO header, and chip-on-submount (CoS) are available upon request.

 **Mechanical**  
Drawings Available on the  
**WEB**

### Optical-Electrical Characteristics

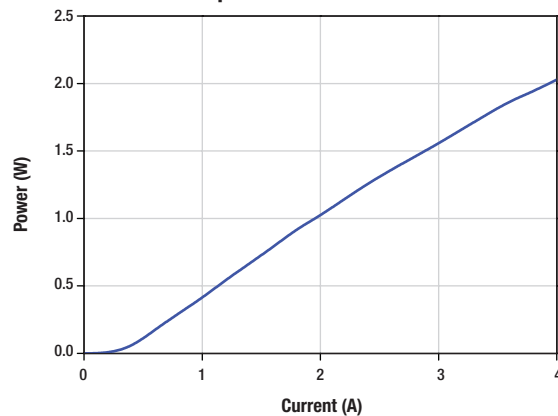
ITEM#		BAL1112CM			BAL1114CM		
Parameter	Symbol	Min	Typical	Max	Min	Typical	Max
Center Wavelength	$\lambda_c$	1.188 $\mu\text{m}$	1.208 $\mu\text{m}$	1.228 $\mu\text{m}$	1.38 $\mu\text{m}$	1.4 $\mu\text{m}$	1.42 $\mu\text{m}$
Spectral Bandwidth (rms)	BW	—	1.5 nm	5 nm	—	3 nm	6 nm
CW Output Power	$P_{CW}$	2.5 W	3 W	—	1.8 W	2 W	—
Operating Current	$I_{OP}$	—	5 A	7 A	—	4 A	5 A
Threshold Current	$I_{TH}$	—	0.6 A	0.75 A	—	0.33 A	0.4 A
Slope Efficiency	—	0.5 W/A	0.6 W/A	—	0.48 W/A	0.55 W/A	—
Operating Voltage	$V_F$	—	1.33 V	1.6 V	—	1.22 V	1.5 V
EO Efficiency	—	35%	40%	—	35%	40%	—
Vertical Farfield (FWHM)	$\theta_T$	20 °	26 °	31 °	31 °	36 °	41 °
Lateral Farfield (1/e <sup>2</sup> )	$\theta_L$	15 °	20 °	25 °	12 °	17 °	22 °

Optical Power vs Current



P/I Curve for BAL1112CM

Optical Power vs Current



P/I Curve for BAL1114CM

ITEM #	\$	£	€	RMB	DESCRIPTION
BAL1112CM	\$ 650.00	£ 468.00	€ 565,50	¥ 5,180.50	1.208 $\mu\text{m}$ , 3 W, Broad-Area Fabry-Perot Laser on C-Mount
BAL1114CM	\$ 650.00	£ 468.00	€ 565,50	¥ 5,180.50	1.4 $\mu\text{m}$ , 2 W, Broad-Area Fabry-Perot Laser on C-Mount