

ALC-3WL-RGB-02500-FM200.22 QUINTA-T

Overview

Main Features

- 447 nm / 1.0W
- 520 nm / 0.7W
- 637 nm / 0.8W
- 200 μ m core detachable fiber
- Temperature sensor
- Power monitor (optional)
- Built-in TEC

QUINTA-T Package

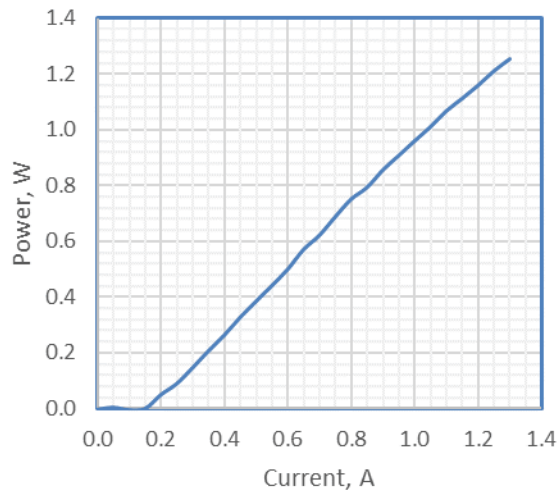


Typical Performance Characteristics

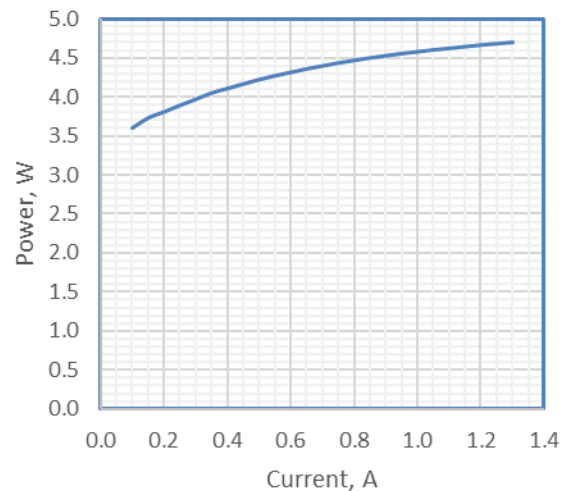
Parameter	Symbol	LD1	LD2	LD3	Unit
Operating temperature	T	20			°C
Temperature sensor setting	R _T	12.5			kOhm
Operating power ex-fiber	P _{op}	1.0	0.7	0.8	W
Center wavelength	λ	447±10	520±10	637±10	nm
Spectrum width, 1/e ²	$\Delta\lambda$	<3	<3	<3	nm
Wavelength-temperature coefficient	$\Delta\lambda/\Delta T$	0.046	0.053	0.15	nm/°C
Linearized wavelength-current	$\Delta\lambda/\Delta I$	---		---	nm/A
Threshold current	I _{th}	0.2	0.27	0.35	A
Differential efficiency	η_{ext}	1.15	0.68	1.1	W/A
Operating current	I _{op}	1.2	1.6	1.2	A
Operating voltage	V _{op}	4.8	4.6	2.3	V
Maximum current (10 seconds)	I _{max}	1.3	1.8	1.3	A
Power monitor photodiode	I _{mon}	>0.05	>0.05	>0.05	mA
TEC maximum voltage	V _{TEC}	4.0			V
TEC maximum current	I _{TEC}	8.0			A
Detachable fiber connector		SMA			
Fiber core diameter	D _{fiber}	200			μ m
Fiber NA		0.22			

Electro-optical characteristics

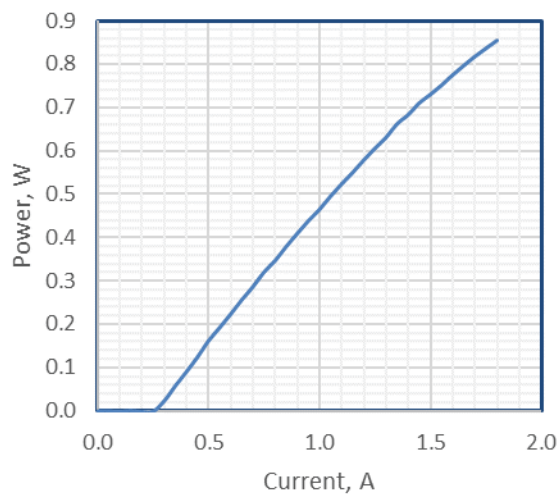
LD1: P-I at 20 °C for 447nm channel



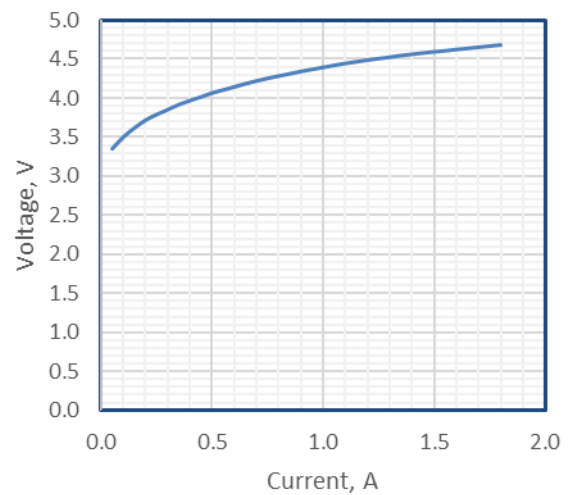
LD1: V-I at 20 °C for 447nm channel



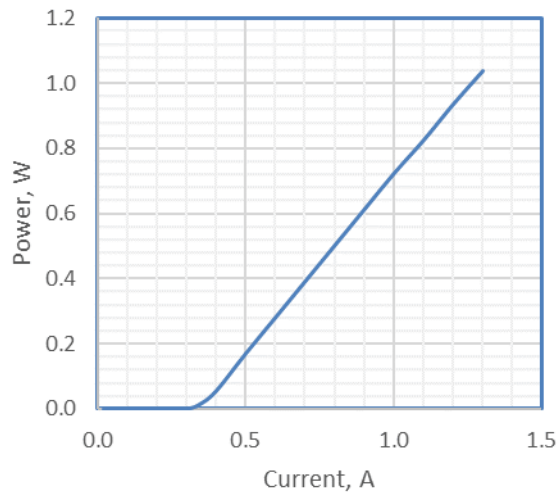
LD2: P-I at 20 °C for 520nm channel



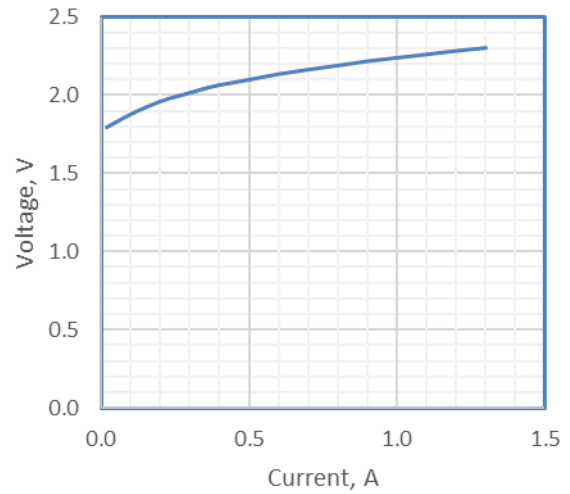
LD2: V-I at 20 °C for 520nm channel



LD3: P-I at 20 °C for 637nm channel



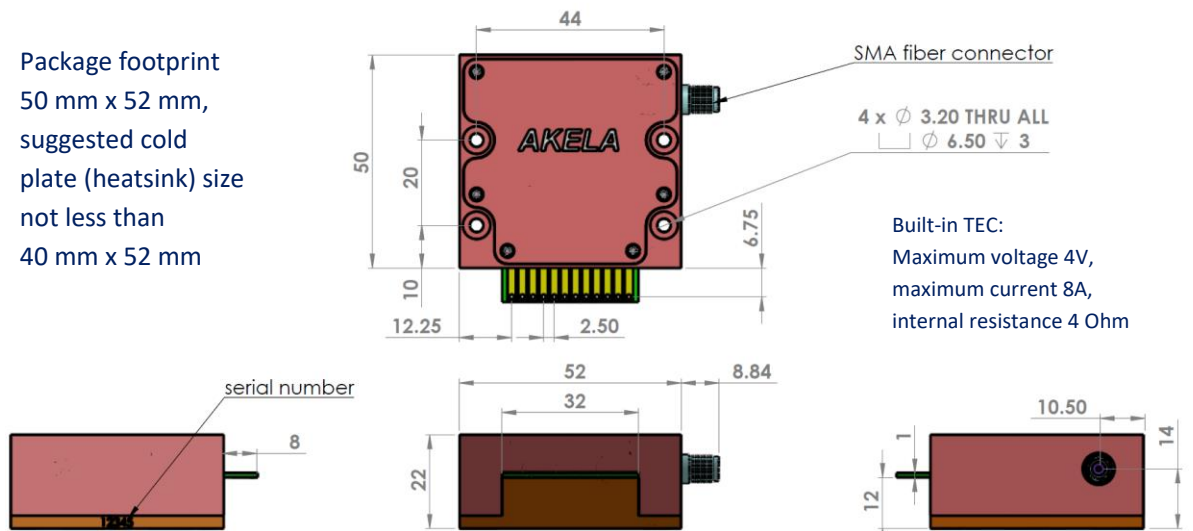
LD3: V-I at 20 °C for 637nm channel



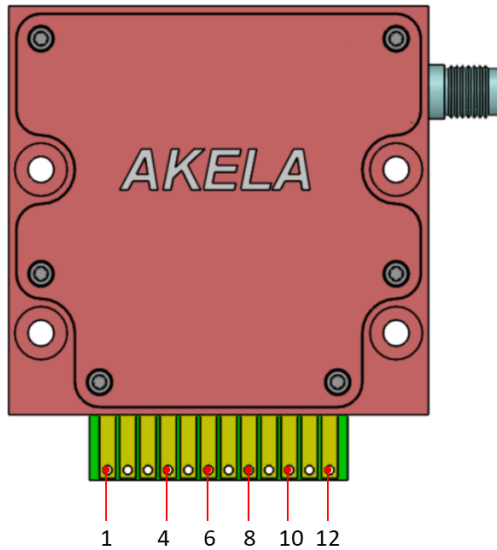
Dimensions and Pinout

Mechanical Drawings

Package footprint
50 mm x 52 mm,
suggested cold
plate (heatsink) size
not less than
40 mm x 52 mm



Pinout



Pin #	Function
1	TEC (-)
2	Laser Diode #1 (+)
3	Laser Diode #1 (-)
4	Power monitor photodiode (+)
5	Power monitor photodiode (-)
6	Laser Diode #2 (+)
7	Laser Diode #2 (-)
8	Thermistor
9	Thermistor
10	Laser Diode #3 (+)
11	Laser Diode #3 (-)
12	TEC (+)

Document Revision History

Revision Number	Revision Date	Nature of Revision	Approved by
1	May 12, 2024	New document created	M.M.



These components do not comply with the Federal Regulations (21 CFR Subchapter 1) as administered by the Center for Devices and Radiological health.

Purchaser acknowledges that his/her products must comply with these regulations before they can be sold.

Akela laser Corporation reserves right to change any specifications.