ALC-3WL03-24000-FM400.22-R QUINTA

Overview

Main Features

- **1470 nm / 8W**
- **1060 nm / 8W**
- **975 nm / 8W**
- **400 µm core detachable fiber**
- **Fiber sensor (optional)**
- **Temperature sensor**
- **Power monitor (optional)**
- **Visible pointer (optional)**

QUINTA 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}	8	8	8	W
Center wavelength	λ	1470±20	1060±15	975±10	nm
Spectrum width, $1/e^2$	Δλ	<15	<12	<8	nm
Wavelength-temperature coefficient	Δλ/ΔT	0.57	0.41	0.34	nm/°C
Linearized wavelength-current	Δλ/ΔI	---		---	nm/A
Threshold current	I_{th}	0.93	1.06	0.61	A
Differential efficiency	η_{ext}	0.98	0.91	0.91	W/A
Operating current	I_{op}	10.5	10.0	9.7	A
Operating voltage	V_{op}	2.7	1.5	1.5	V
Maximum current (10 seconds)	I_{max}	11.5	11.5	11.5	A
Power monitor photodiode	I_{mon}	>0.05	>0.05	>0.05	mA
Detachable fiber connector		SMA			
Fiber core diameter	D_{fiber}	400			µm
Fiber NA		0.22			

OPTIONAL POINTER: >1mW at 638±5nm, 2.9V operating voltage, typical drive current <30mA

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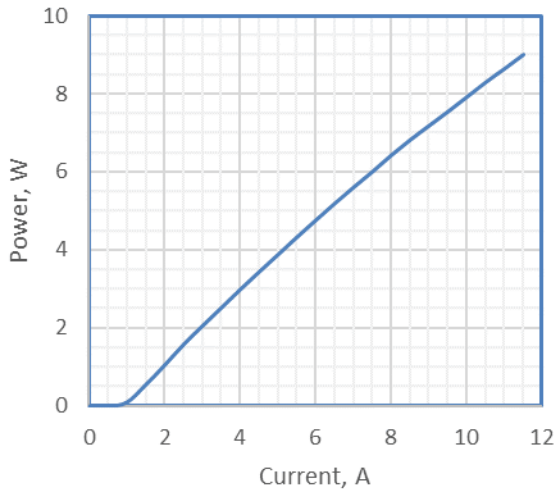
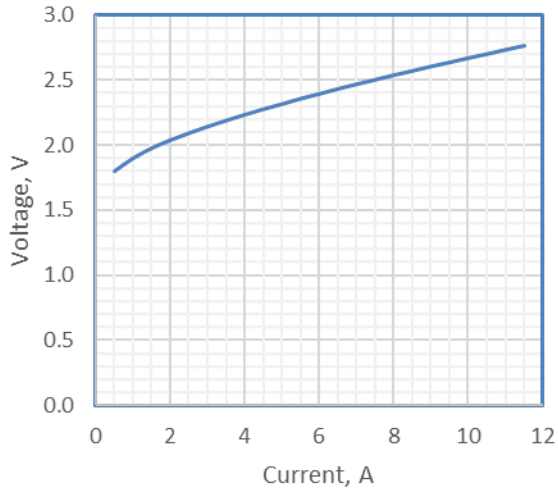
Electro-optical characteristics

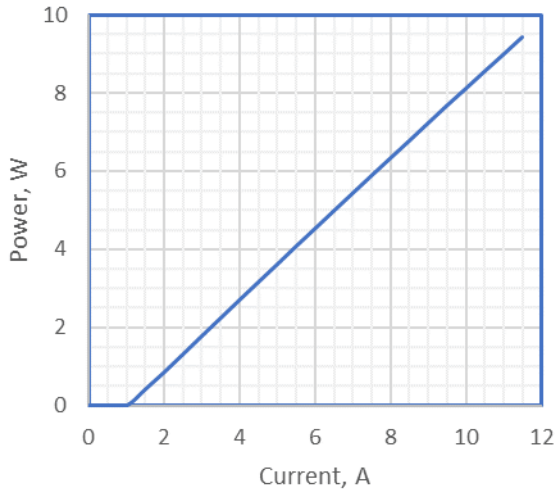
LD1: P-I at 20 °C for 1470nm channel



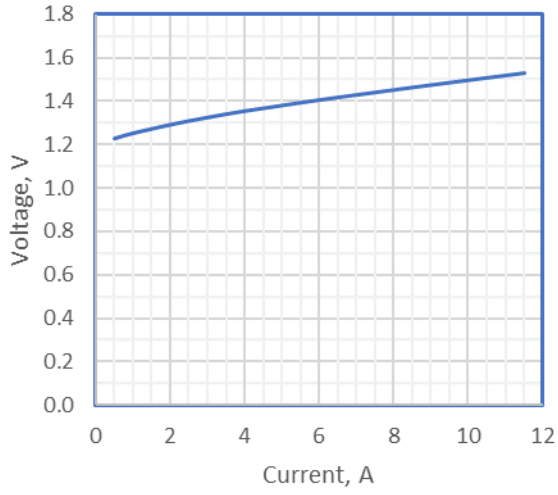
LD1: V-I at 20 °C for 1470nm channel



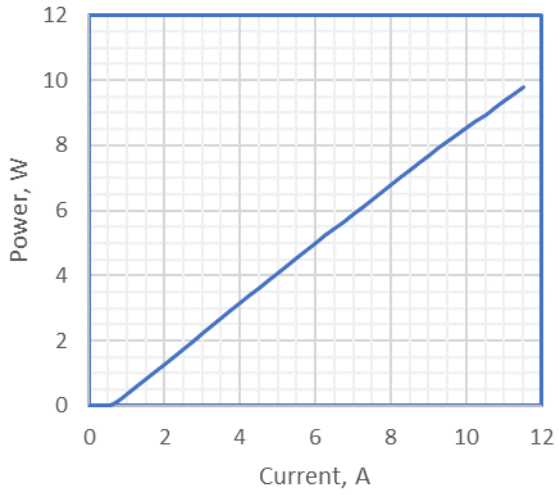
LD2: P-I at 20 °C for 1060nm channel



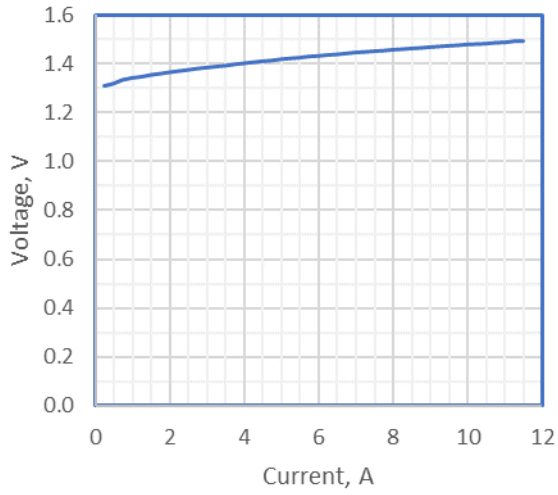
LD2: V-I at 20 °C for 1060nm channel



LD3: P-I at 20 °C for 975nm channel



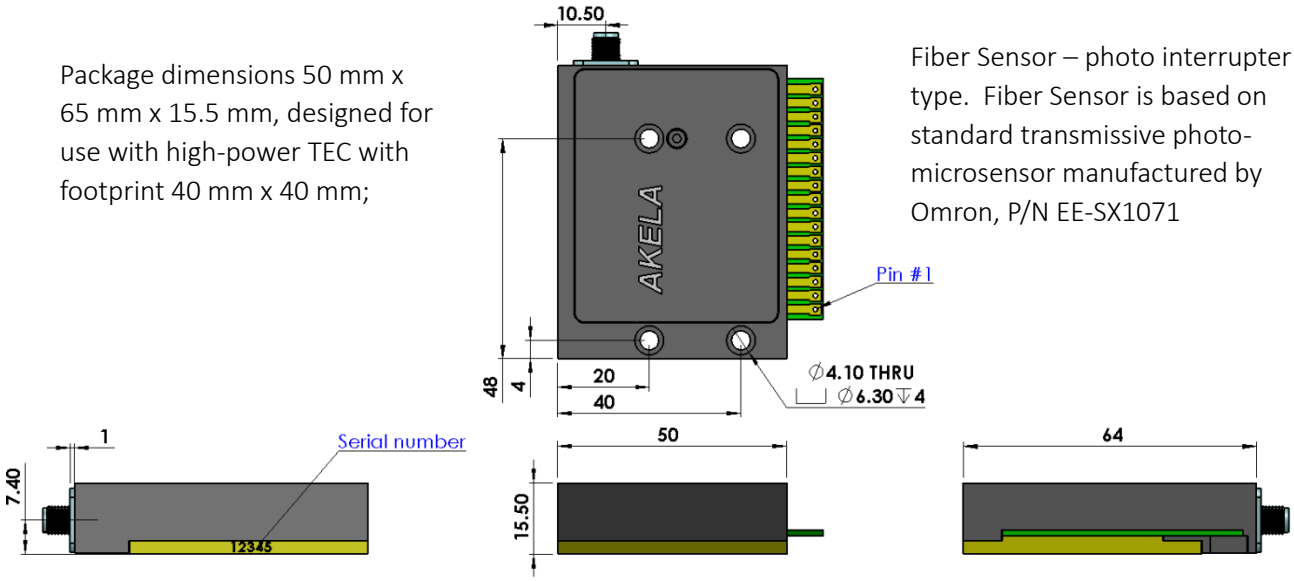
LD3: V-I at 20 °C for 975nm channel



Dimensions and Pinout

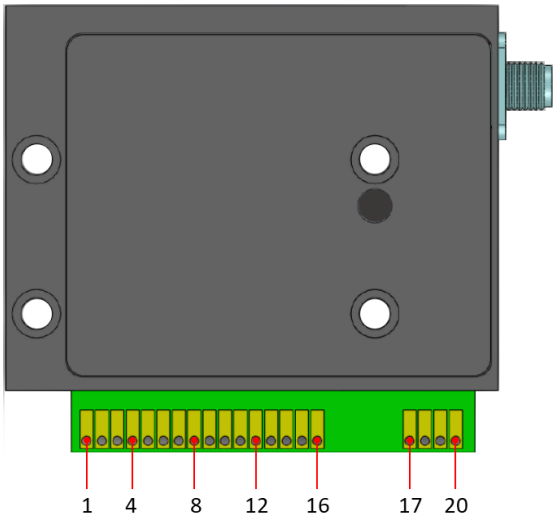
Mechanical Drawings

Package dimensions 50 mm x 65 mm x 15.5 mm, designed for use with high-power TEC with footprint 40 mm x 40 mm;



Fiber Sensor – photo interrupter type. Fiber Sensor is based on standard transmissive photo-microsensor manufactured by Omron, P/N EE-SX1071

Pinout



Pin #	Function
1	Red pointer (+) / Optional
2	Red pointer (-) / Optional
3	Power monitor photodiode #1 (+)
4	Laser Diode #1 (+)
5	Not used
6	Power monitor photodiode #1 (-)
7	Not Used
8	Laser Diode #1 (-)
9 & 10	Thermistor outputs
11	Laser Diode #2 (+)
12	Laser Diode #2 (-)
13	Power monitor photodiode #2 (+)
14	Laser Diode #3 (+)
15	Laser Diode #3 (-)
16	Power monitor photodiode #2 (-)
17	Fiber Sensor Phototransistor Collector
18	Fiber Sensor Phototransistor Emitter
19	Fiber Sensor LED Cathode
20	Fiber Sensor LED Anode

Document Revision History

Revision Number	Revision Date	Nature of Revision	Approved by
1	May 11, 2024	New document created	*M.M.*

RoHS COMPLIANT

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.