

Figure 1. Physical Photo of ATFLD1W830

### FEATURES

High output power: 1W

Small fiber core diameter: 60 $\mu$ m

100 % Lead (Pb)-free and RoHS Compliant

### SPECIFICATIONS

Table 1. Specification of ATFLD1W830

Center Wavelength@25 °C	$\pm 3$ nm	830nm	$\pm 10$ nm
Output Power	---	1W	---
Spectral Width (FWHM)	----	1nm	2.5nm
Recommended Case Temperature	25 °C		
Temperature Coefficient of Wavelength	0.3nm/ °C		
Threshold Current (Typ.)	180mA		
Operating Current (Typ.)	1.5A		
Operating Voltage	2.0V		
Fiber Core Diameter	50 $\mu$ m or 60 $\mu$ m Optional		
Fiber Numerical Aperture ( NA)	0.12 or 0.22 N.A. Optional		
Fiber Length	50cm		
Connector Type	SMA905/ST/FC/SC		
Package Style	2-pin		
Reverse Voltage (Vr)	2.0V		
Operating Temperature (T <sub>op</sub> )	+10 °C ~ +30 °C		
Storage Temperature (T <sub>stg</sub> )	-40 °C ~ +80 °C		
Lead soldering temperature (10 sec.)	260 °C		

### APPLICATIONS

830nm 1W fiber coupled laser diode module 2-pin package 60 $\mu$ m fiber can be used in printing, medical laser treatment and etc.

### DESCRIPTION

ATFLD1W830 is designed to result in volume products with high efficiency, stability and superior beam quality. The products are achieved by transforming the asymmetric radiation from the laser diode chip into an output fiber with small core diameter by using special micro optics. Inspecting and burn-in procedures in every aspect come to a result to guarantee each product with reliability, stability and long lifetime.



DIMENSIONS

Unit: mm

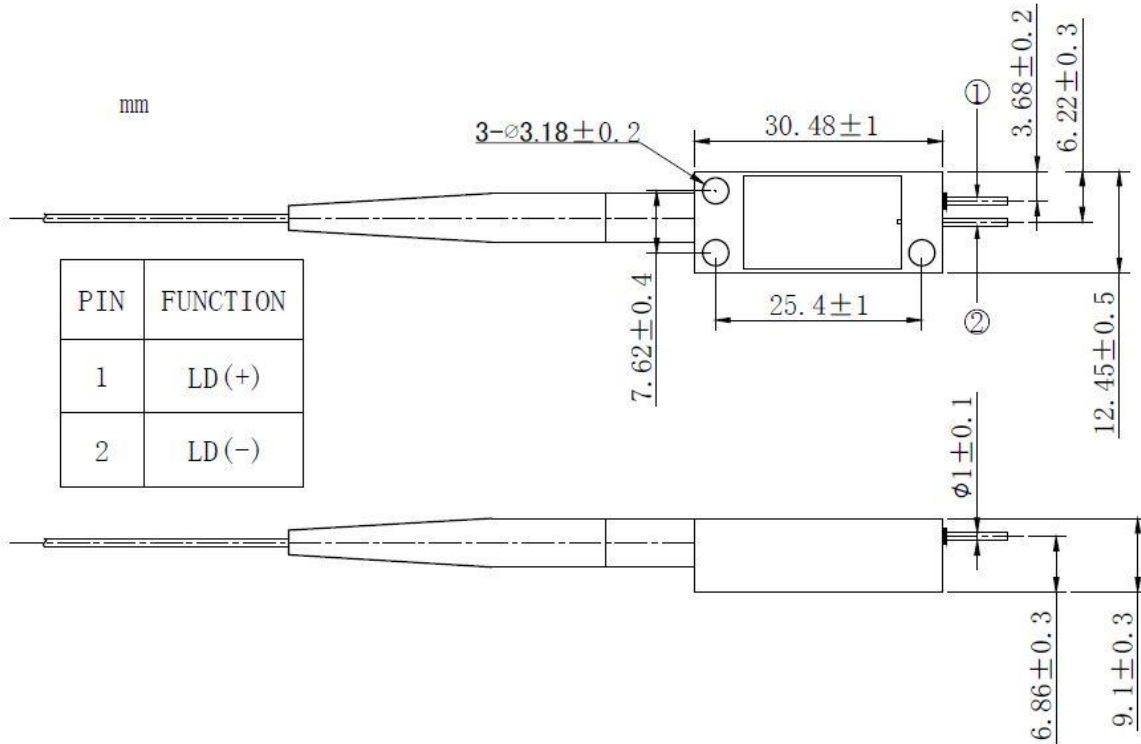


Figure 2. Dimensions of ATFLD1W830

OPERATING NOTES

Avoid eye exposure to direct or scattered radiation.

ESD precautions must be taken.

Please connect pins to wires by solder instead of using socket when operation current is higher than 6A.

Soldering point should be close to the root of the pins. Soldering temperature should be lower than 260 °C and time shorter than 10 second.

Use constant current power supply, avoid surge current.

Laser diode must be used according to the specifications.

Laser diode must work with good cooling.

A minimum bend diameter should be 300 times greater than the fiber diameter.

Operation temperature is 10 °C ~ 30 °C.

Storage: -40°C ~ +80 °C, all pins short-circuit.



**NOTICE**

1. ATI warrants performance of its products for one year to the specifications applicable at the time of sale, except for those being damaged by excessive abuse. Products found not meeting the specifications within one year from the date of sale can be exchanged free of charge.
2. ATI reserves the right to make changes to its products or to discontinue any product or service without notice, and advise customers to obtain the latest version of relevant information to verify, before placing orders, that information being relied on is current and complete.
3. All products are sold subject to the terms and conditions of sale supplied at the time of order acknowledgment, including those pertaining to warranty, patent infringement, and limitation of liability. Testing and other quality control techniques are utilized to the extent ATI deems necessary to support this warranty. Specific testing of all parameters of each device is not necessarily performed, except those mandated by government requirements.
4. Customers are responsible for their applications using ATI components. In order to minimize risks associated with the customers' applications, adequate design and operating safeguards must be provided by the customers to minimize inherent or procedural hazards. ATI assumes no liability for applications assistance or customer product design.
5. ATI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of ATI covering or relating to any combination, machine, or process in which such products or services might be or are used. ATI's publication of information regarding any third party's products or services does not constitute ATI's approval, warranty or endorsement thereof.
6. IP (Intellectual Property) Ownership: ATI retains the ownership of full rights for special technologies and/or techniques embedded in its products, the designs for mechanics, optics, plus all modifications, improvements, and inventions made by ATI for its products and/or projects.