PDLX Long Wavelength Photodetector

1. Features

- 30mm mounting holes for optical cage system
- Wavelength range 900-2600nm
- Optional lithium battery power supply, lower noise
- Optional FC flange, can use fiber optic coupling

2. Applications

- Optical experiment
- Pulsed light waveform detection

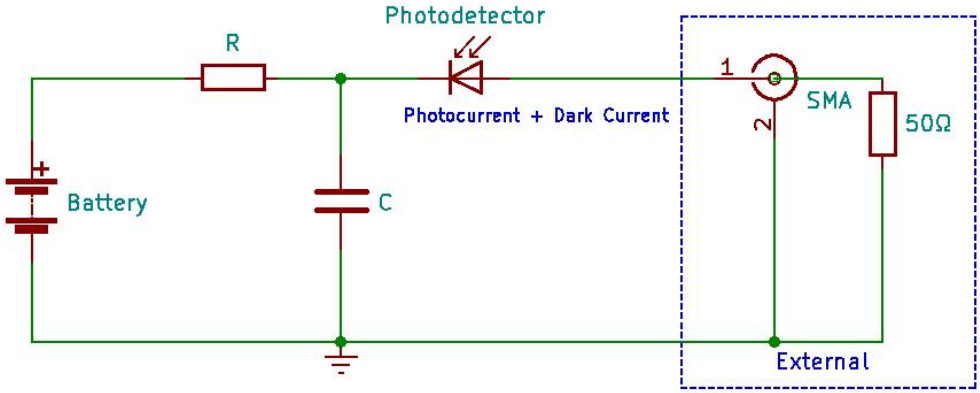
3. Specifications

Items	PDLX03D2-200M
Materials	InGaAs
Wavelength	900-2600nm
Photosensitive diameter	0.3mm
Responsivity	1.3A/W @2300nm
Bandwidth[a]	DC-200MHz
Rise time[a]	1.8ns
Damage threshold	5mW
Output Impedance	50Ω
Output coupling method	DC
Output connector	SMA female
Operating voltage	9-12VDC
Operating temperature	-20~65℃
Storage temperature	-40~85℃

Remarks:

a For 50Ω load

4. Block Diagram



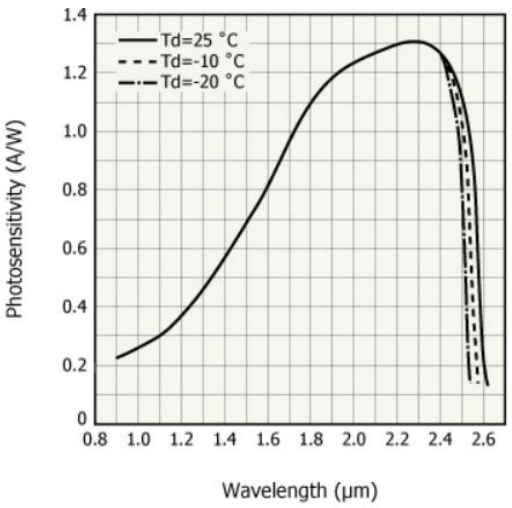
5. Operating Procedures

- Adjust the voltage grid of the oscilloscope to 10mV/div and set the input impedance of the oscilloscope to 50Ω;
- Connect the output of the detector to the input of the oscilloscope with a coaxial cable;
- Ensure that the power received by the detector is within the saturation power, and then turn on the light source to be measured and align it with the photosensitive area;
- Observe the waveform of the oscilloscope.

Note: We use a load resistor R to convert the photocurrent I to a voltage V for viewing on an oscilloscope: V = I x R

Load resistance affects response speed, and for maximum bandwidth we recommend using a 50 ohm coaxial cable with a 50 ohm terminating resistor at the other end of the cable for impedance matching. If bandwidth is not important, the amount of voltage in a given light can be increased by gaining the load resistor. The length of the coaxial cable can have a profound effect on the response, so it is recommended to keep the cable as short as possible.

6. Response curve



Note: Response curves are typical values for reference only.

7. Mechanical dimensions