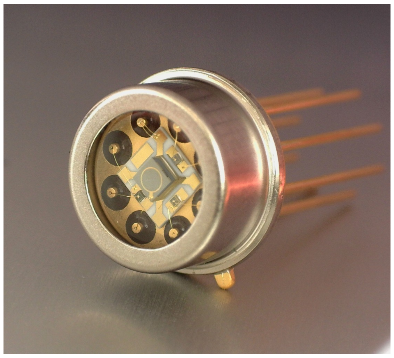
Peak Emission Wavelengths: 1460,1720,1900nm
Detector Sensitivity Wavelength Range: 600-2600nm

The MTMD1479PD6T38 is a SWIR multi-chip emitter with a InGaAs Photodiode designed for applications requiring various emission sources in a small, densley packaged area. These devices can be custom designed for specific wavelengths and outputs.



FEATURES

- > Hermetically Sealed TO-5 Metal Can Package
- > PIN Photodiode Chip Active Area: 1.0mm
- > High Output Power

APPLICATIONS

- > High Speed Communications
- > Medical / Chemical Analysis
- > Biofluorescense Analysis

Emitter Absolute Maximum Ratings (Ta=25ºC)

ITEMS	SYMBOL	RATINGS			UNIT
		1460	1720	1900	
Forward Current (DC)	IF	50	50	50	mA
Forward Current (Pulse) *1	IFP	--	--	--	A
Reverse Voltage	VR	5	5	5	V
Power Dissipation	PD	50	50	50	mW
Operating Temperature Range	Topr	-20~+85			℃
Storage Temperature Range	Tstg	-30~+100			℃
Junction Temperature	Tj	100			℃
Lead Soldering Temperature *2	Tls	260			℃

*1: Tw=10μsec, T=10msec. *2: Time 5 Sec max; Position: Up to 3mm from the body.

Emitter Electrical & Optical Characteristics (Ta=25ºC)

ITEMS	SYMBOL	WAVELENGTH	CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	VF	1460	IF=50mA	--	1.02	--	V
Forward Voltage	VF	1720	IF=50mA	--	0.096	--	V
Forward Voltage	VF	1900	IF=50mA	--	0.090	--	V
Reverse Current	IR	--	VR=5V	--	--	10	uA
Power Output	PO	1460	IF=50mA	--	2.9	--	mW
Power Output	PO	1720	IF=50mA	--	2.3	--	mW
Power Output	PO	1900	IF=50mA	--	1.9	--	mW

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Emitter Electrical & Optical Characteristics (Ta=25ºC)

ITEMS	SYMBOL	WAVELENGTH	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Emission Wavelength	λp	1460	IF=50mA	--	1460	--	nm
Peak Emission Wavelength	λp	1720	IF=50mA	--	1741	--	nm
Peak Emission Wavelength	λp	1900	IF=50mA	--	1893	--	nm
Spectral Line Half Width	Δλ	1460	IF=50mA	--	107	--	nm
Spectral Line Half Width	Δλ	1720	IF=50mA	--	141	--	nm
Spectral Line Half Width	Δλ	1900	IF=50mA	--	160	--	nm

Detector Electrical & Optical Characteristics (Ta = 25ºC)

ITEMS	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Breakdown Voltage	VR	IR=100uA	--	--	1	V
Sensitivity Range	λ	VR=0V	600	--	2600	nm
Dark Current	ID	VR=1V	--	--	300	uA
Capacitance	C	VR=0V	--	1000	--	pF
Capacitance	C	VR=1V	--	85	--	pF
Responsivity	R	λ=2400nm	--	1.24	--	A/W
Shunt Resistance	RS	VR=10mV	--	3.3	--	MOhm
Quantum Efficiency	QE	λ=1840nm	--	72	--	%
Light Current @1300nm	IL	If=10mA	--	30	--	uA
Light Current @1300nm	IL	If=20mA	--	65	--	uA

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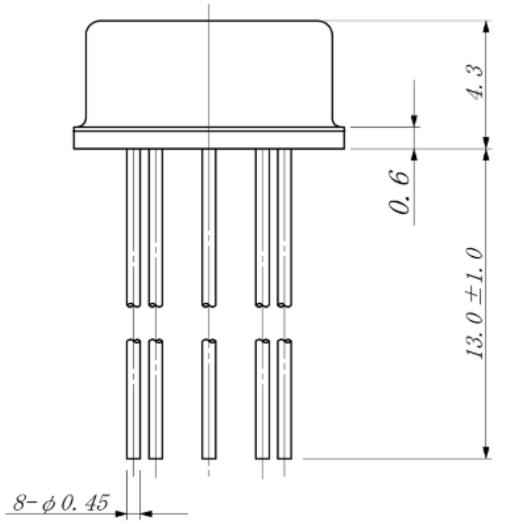
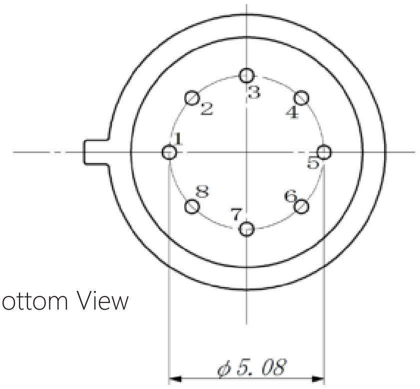
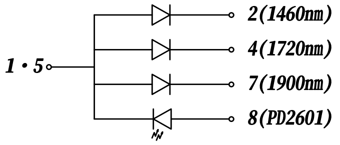


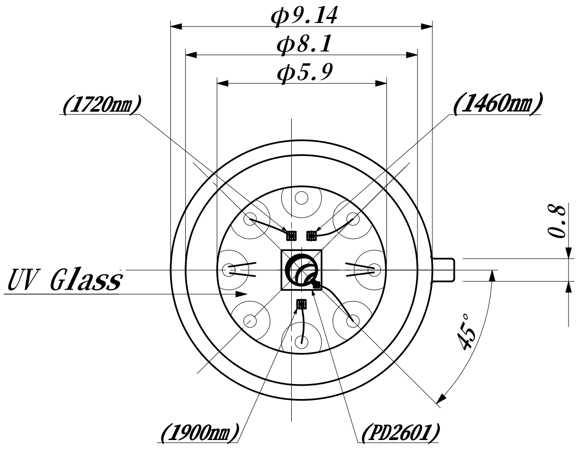
Unit: mm, Tolerance: ±0.2



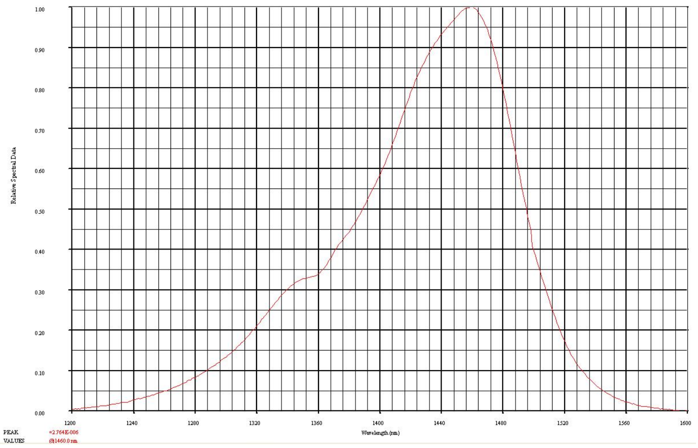
Bottom View



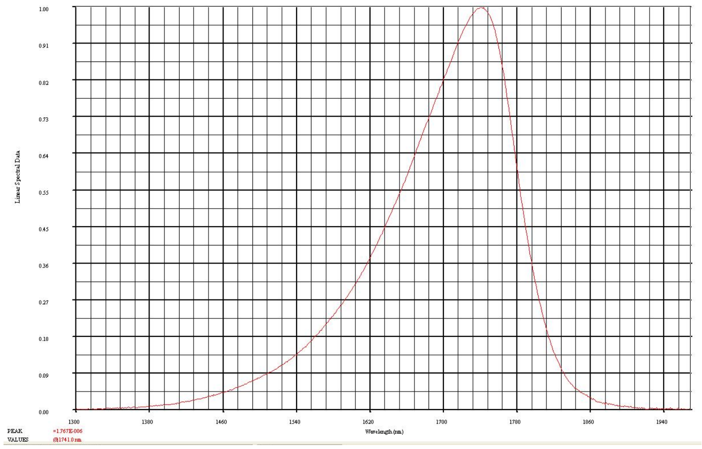
1- LED Anode • PD Cathode
2- 1460nm Cathode
3- NC
4- 1720nm Cathode
5- LED Anode • PD Cathode
6- NC
7- 1900nm Cathode
8- PD2601 Anode com



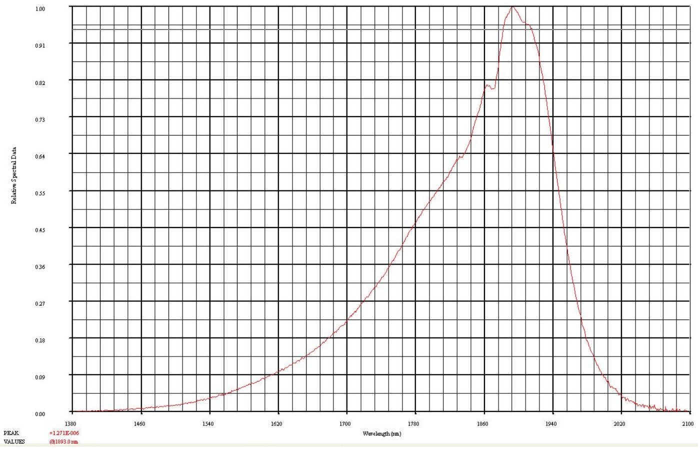
1460nm Spectral Respone



1720nm Spectral Respone



1900nm Spectral Respone



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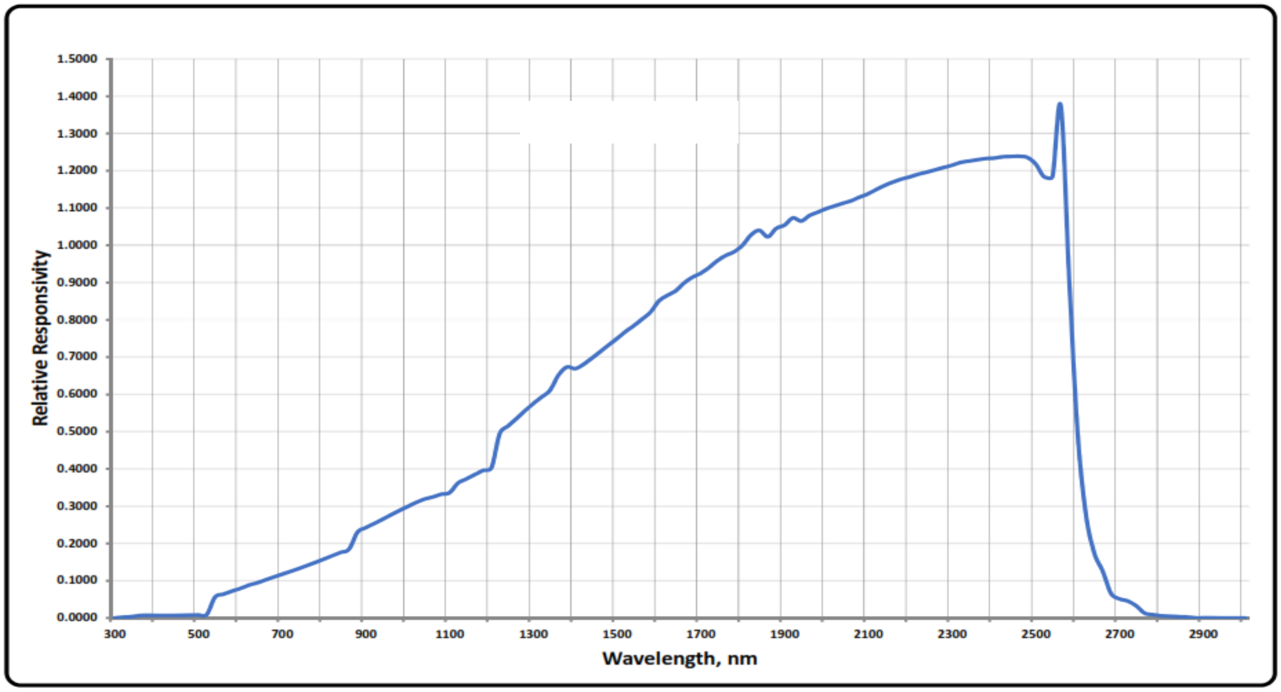
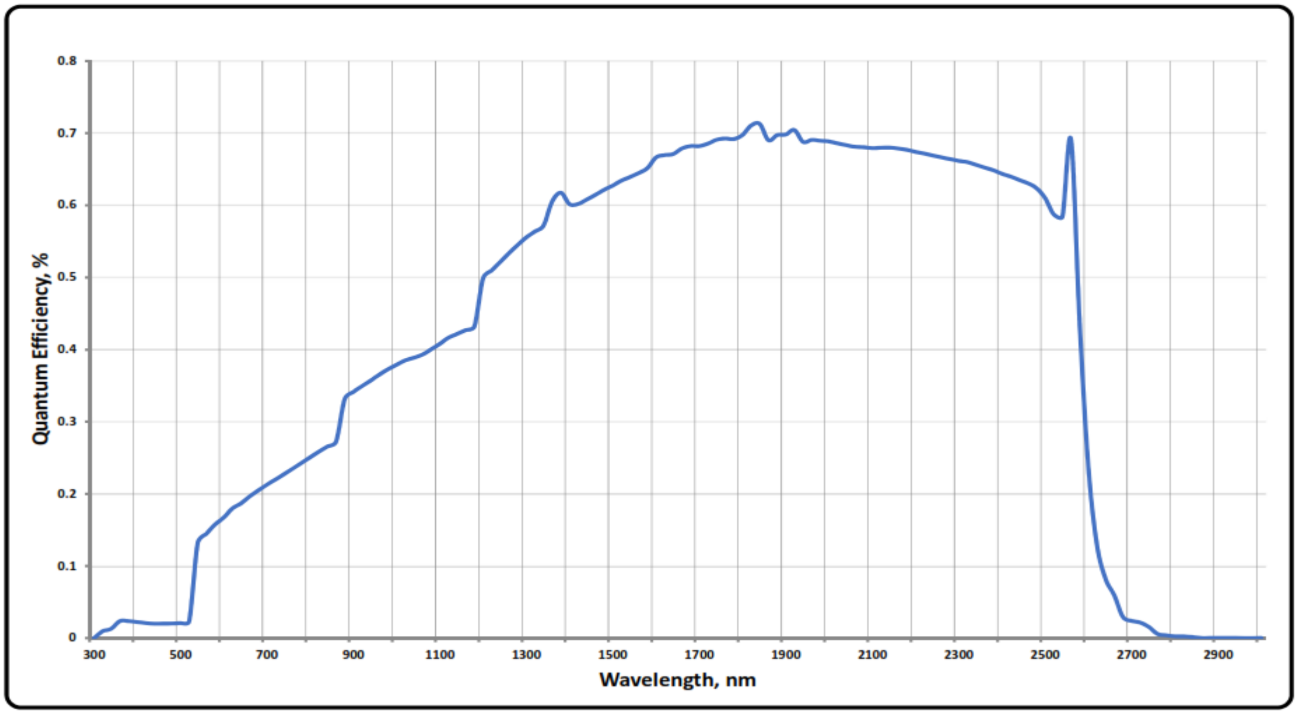
Spectral Responsivity



Quantum Efficiency



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