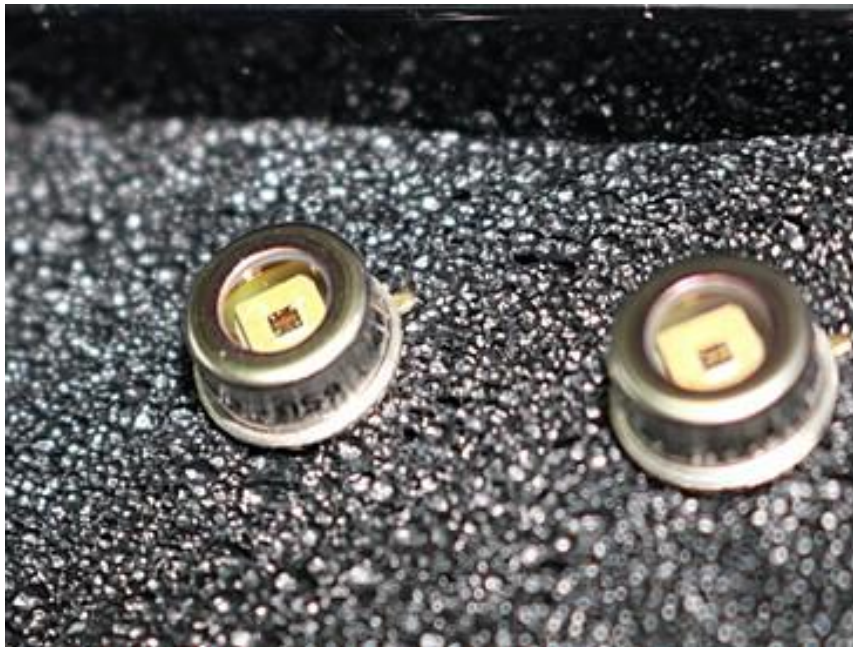


900-2700nm Large photosensitive surface

InGaAs Indium Gallium Arsenide Photodiode

$\phi 2\text{mm}$



● Product Description

The PL3000 series is a full-color PIN photodiode with a cutoff wavelength of up to 2700nm. It uses InGaAs material, a ternary compound semiconductor InGaAs material used to make various optoelectronic devices, and the material itself has stable performance. This series is designed for environmental gas detection applications, measuring CO or CO₂, it provides



excellent parallel resistance and response in a wide spectrum range, in addition, we can read the pin change to TO-46, TO-18, TO-5 optional.

● Product features

Effective area (0.3-3mm) Longer cut-off wavelength 2.7um High shunt resistance、 Multiple lens options (biconvex, plano-convex, ball lens) 、 Multiple packaging structures available (TO46, TO18, TO5)

● Part Number

MP-CPD-B-I-4U2

● Application area

Gas sensing detection、 Flame/spark detection、 FTIR、 Short-wave infrared photoelectric detection

● Core parameters

Wavelength Range	Active Area
900-2700nm	2mm

● General Parameters

2.7um extended response electrical characteristics @25°C±2°C

Performance specifications	Unit	MP-PLC 300/2.6	MP-PLC 500/2.6	MP-PLC 1000/2.6	MP-PLC 2000/2.6	MP-PLC 3000/2.6
Response diameter	mm	0.3	0.5	1	2	3
Peak wavelength (typical)	um	2.2± 0.1	2.2±0.1	2.2±0.1	2.2±0.1	2.2±0.1
Cut-off wavelength (50%)	um	2.6± 0.1	2.6±0.1	2.6±0.1	2.6±0.1	2.6±0.1
Responsivity @λP (min/typ)	A/W	0.9/1.0	0.9/1.0	0.9/1.0	0.9/1.0	0.9/1.0
Shunt resistance (min/typ)	Ω	16K/25 K	5K/8K	2K/4K	0.5K/1.5 K	0.2K/0.5 K
Dark current (max)	uA	13@1V	20@0.5V	80@0.5V	320@0.5 V	500@0.5 V
Capacitance @0V	pF	100	270	1000	4400	10000
Bandwidth W/50Ω@0V	MHz	32	16	3.2	0.8	0.35
Rise time W/50Ω@0V	ns	11	22	110	440	1000
NEP@λ _{PEAK}	W/Hz ^{1/2}	81× 10-14	143× 10-14	203× 10-14	331× 10-14	574× 10-14

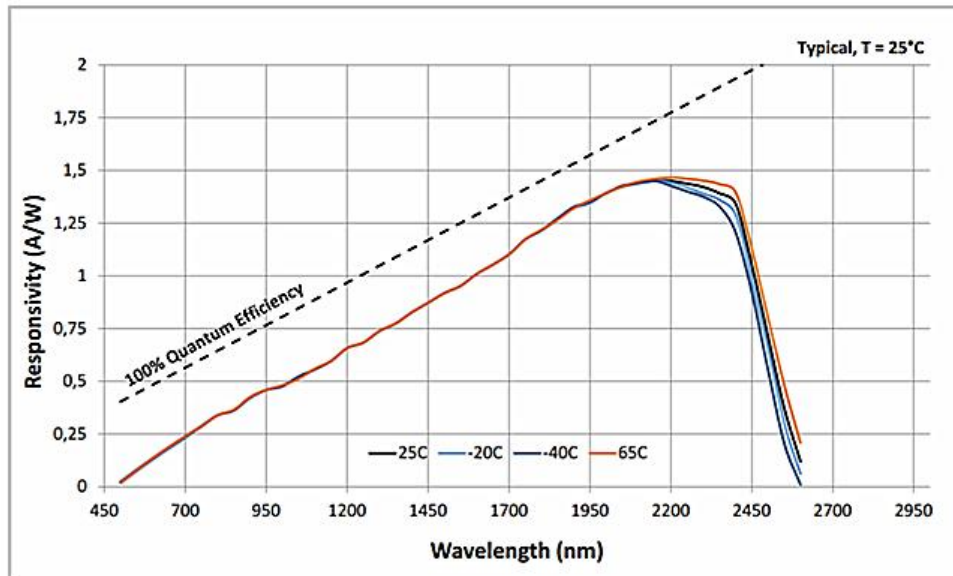


Linearity ($\pm 0.2\text{dB}@0\text{v}$)	dBm	6	6	6	6	6
Packaging specifications	-	TO-46	TO-46	TO-46	TO-5	TO-5

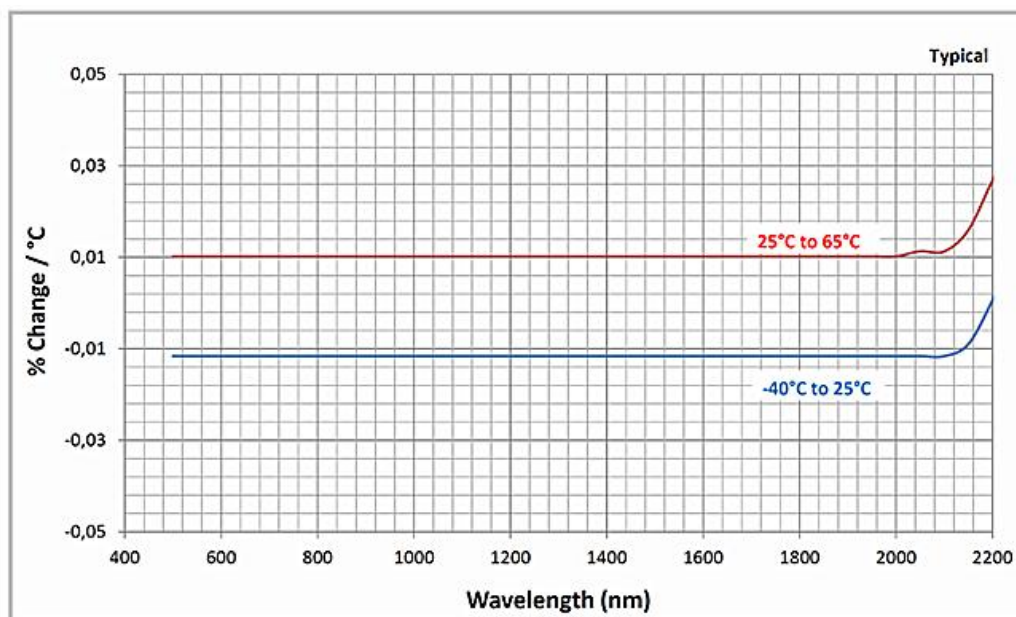
Maximum Ratings

Performance specifications	Unit	MP-PLC	MP-PLC	MP-PLC1	MP-PLC2	MP-PLC
		300/2.6	500/2.6	000/2.6	000/2.6	3000/2.6
Storage temperature	°C	-40-125	-40-125	-40-125	-40-125	-40-125
Operating temperature	°C	-40-85	-40-85	-40-85	-40-85	-40-85
Reverse breakdown voltage	V	2	0.5	0.5	0.5	0.5
Reverse breakdown current	mA	10	10	10	10	10
Forward current	mA	10	10	10	10	10
Maximum power handling	mW	50	50	50	50	50

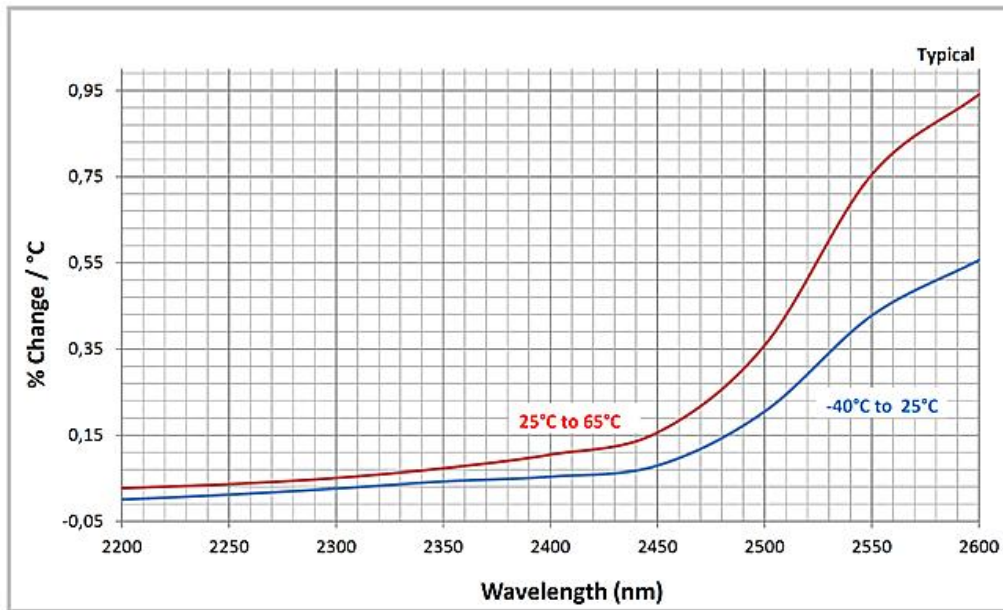
Spectral response



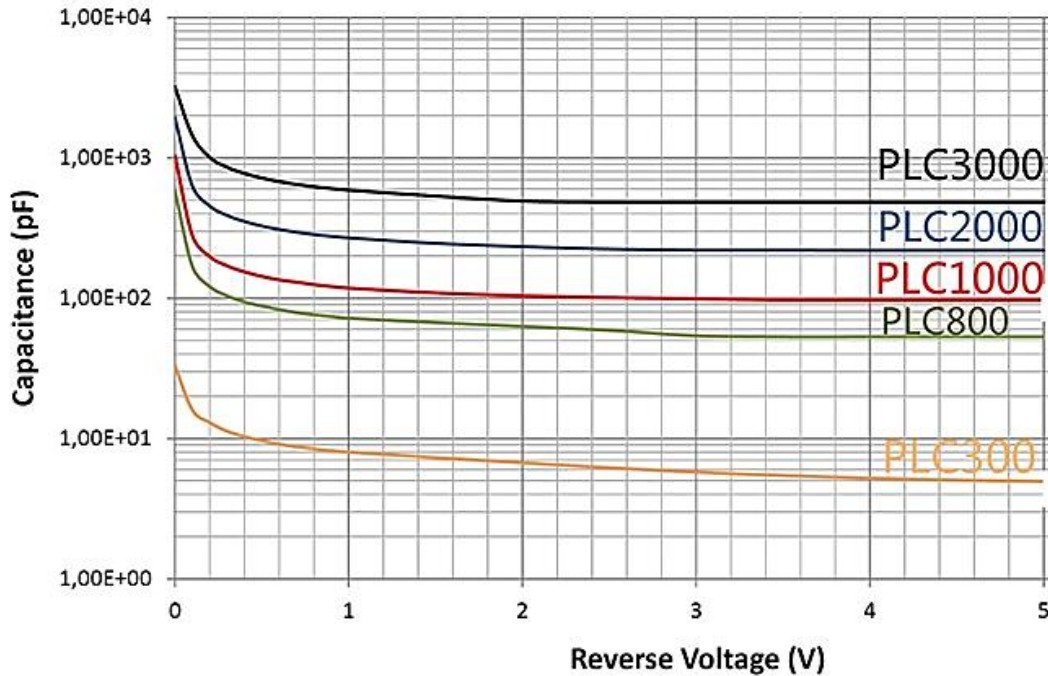
Response temperature coefficient I



Response temperature coefficient II

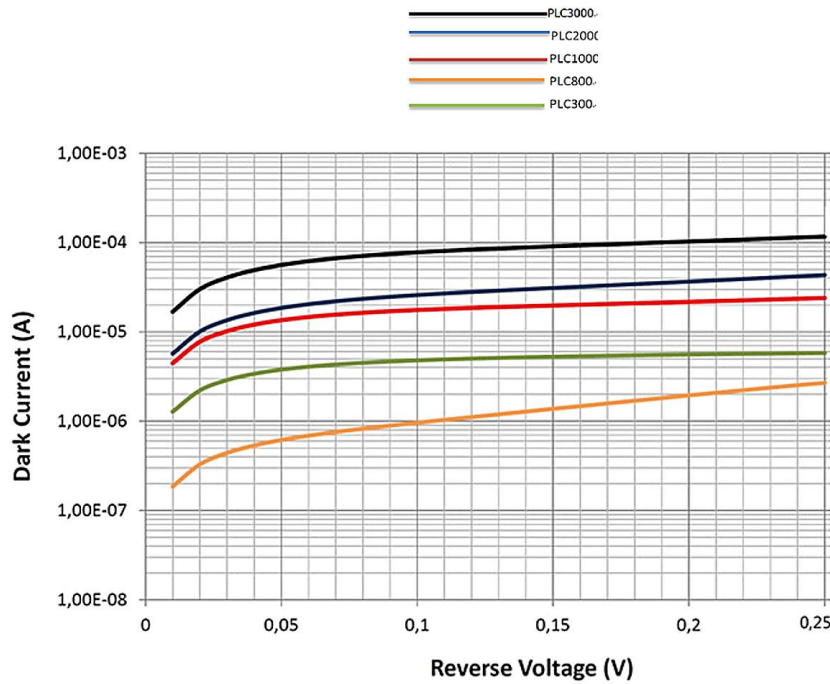


Response temperature coefficient III

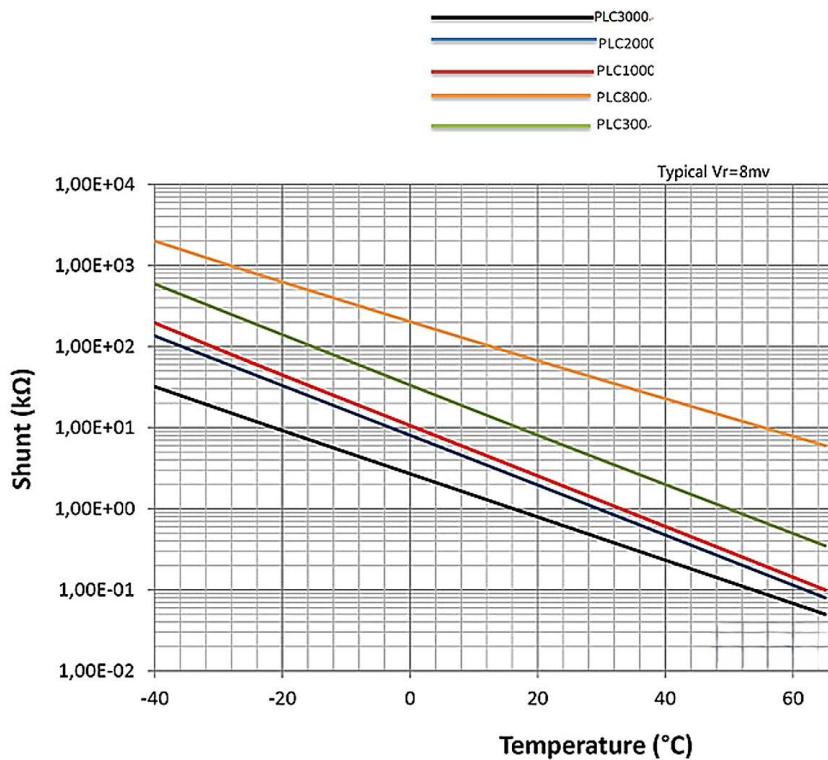




Dark Current and Dark Current Backup Voltage



Comparative Temperature of Shunt Resistance





Ordering Information

MP-PLC-□-□□-W□□□□-XX

□-----detector material

A: Si PD

B: InGaAs PD C: Si APD

D: InGaAs APD

E: Si Quadrant APD

F: InGaAs Quadrant APD

□□-----light sensing photosensitive surface diameter

300: 0.3mm

500: 0.5mm

1000: 1mm

2000: 2mm

3000: 3mm

W□□□□-----cut-off wavelength

W2.6: 2.6um

XX: detector package type

T46W=TO46 Window

T18W=TO18 Window

T5W=TO5 Window

T46L=TO46 Lens

T18L=TO18 Lens



T5L=TO5 Lens

T46W=TO46 Window

T46W=TO46 Window

SA=SMF-28E+ FC/APC

SP=SMF-28E+ FC/PC

PA=PM Fiber+ FC/APC

PP=PM Fiber+ FC/PC