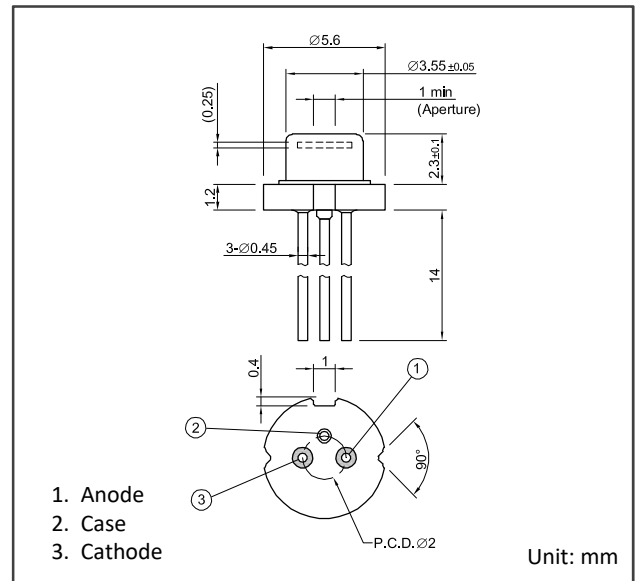


Description

- InGaAs avalanche photodiode
- ϕ 5.6mm CAN package with flat window cap

**Absolute Maximum Ratings**

Parameter	Symbol	Value	Unit	Note
Forward current	I_F	10	mA	
Reverse current	I_R	2	mA	
Operating temperature	T_{opr}	-40 to +85	°C	Avoid dew condensation
Storage temperature	T_{stg}	-40 to +85	°C	Avoid dew condensation

1. KPDEA005-56F**Electrical and Optical Characteristics** ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Active diameter	D	55			μm	
Bandwidth	BW	-	3.0	-	GHz	M=10
Responsivity	R	0.85	0.95	-	A/W	$\lambda=1310\text{nm}$, M=1
		0.95	1.05	-		$\lambda=1550\text{nm}$, M=1
Dark current	I_D	-	10	50	nA	$V_R=V_B \times 0.9$
Breakdown voltage	V_B	35	45	55	V	$I_D=10\mu\text{A}$
Temperature coefficient of V_B	$\Delta V_B/\Delta T$	0.08	0.10	0.12	V/°C	
Chip capacitance	C_{chip}	-	0.38	0.50	pF	f=1MHz
Total capacitance	C_t	-	0.68	0.80	pF	f=1MHz

2. KPDEA007-56F

Electrical and Optical Characteristics (Ta=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Active diameter	D	75			μm	
Bandwidth	BW	-	2.0	-	GHz	M=10
Responsivity	R	0.80	0.90	-	A/W	λ=1310nm, M=1
		0.90	1.05	-		λ=1550nm, M=1
Dark current	I _D	-	15	65	nA	V _R =V _B × 0.9
Breakdown voltage	V _B	35	45	55	V	I _D =10μA
Temperature coefficient of V _B	ΔV _B /ΔT	0.08	0.10	0.12	V/°C	
Chip capacitance	C _{chip}	-	0.54	0.65	pF	f=1MHz
Total capacitance	C _t	-	0.9	1.1	pF	f=1MHz

- Specifications, characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (2011/65/EU).



Opto-technologies for the Future

KYOTO SEMICONDUCTOR Co.,Ltd.

Headquarters : 307-21 Nishiote-cho Fushimi-ku Kyoto 612-8362 Japan

Tokyo Sales Office: 24th Sky Bldg.2F, 1-34-3 Shinjuku Shinjuku-ku, Tokyo 160-0022 Japan

Kansai Sales Office: 307-21 Nishiote-cho Fushimi-ku Kyoto 612-8362 Japan

Kyosemi Opto America Corp: 4655 Old Ironsides Suite 230 Santa Clara, California 95054 USA

Eniwa Operation: 385-31 Toiso Eniwa-shi, Hokkaido 061-1405 Japan

Kamisunagawa Operation: 70-1 Kamisunagawa Kamisunagawa-cho Sorachi-gun, Hokkaido 073-0200 Japan

TEL: +81-75-605-7311

TEL: +81-3-5312-5360

TEL: +81-75-605-7314

TEL: +1-408-492-9361

TEL: +81-123-34-3111

TEL: +81-125-62-3611