

OEC


 Opto-Electronic
 Components


YOUR PARTNER

Ge Photodiodes

800nm – 1800nm

Electrical Characteristics

@25°C +/- 2°C

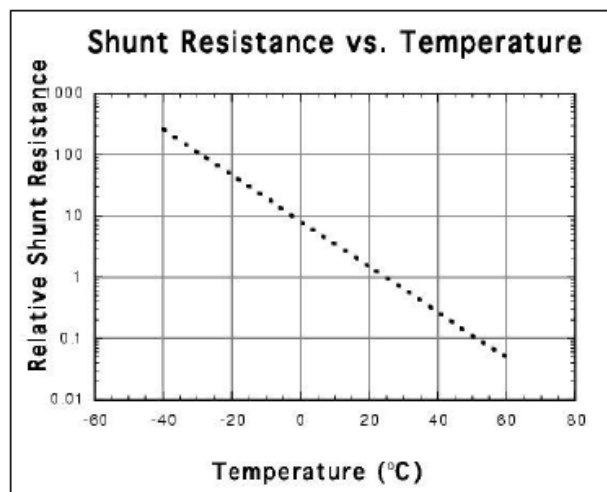
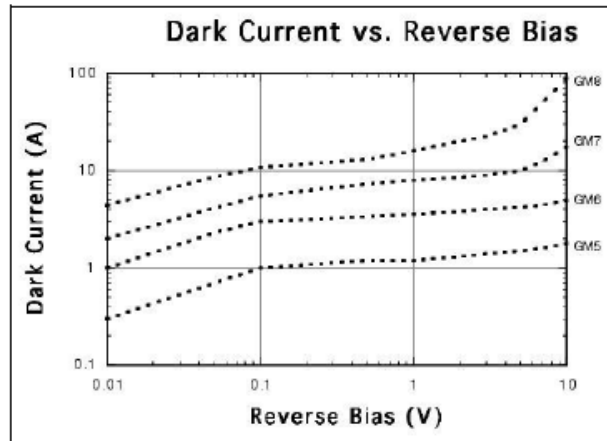
Basic Type

Type	Active Area	Shunt Resistance		Dark Current	Bias for Test	Bias	Capacitance	NEP	Cut-off Frequency @ Bias for Test
	mm (dia)	@10 mV Min	Typ	@ Bias for Test µA (max)	V	Max V	Max pF	pW/√Hz	@50 Ohm MHz
GM2	0.5 sq.	30	60	2	10	15	27	1	120
GM2HS	0.5 sq.	100	150	1	3	5	55	0.3	60
GM2VHS	0.5 sq.	250	350	0.7	0.3	0.5	200	0.2	35
GM2VHR	0.5 sq.	550	900	0.5	0.3	0.5	250	0.1	30
GM3	0.1	120	250	1	10	15	2	0.3	1500
GM3HS	0.1	350	500	0.3	3	5	6	0.1	500
GM3VHS	0.1	1500	2500	0.1	0.3	0.5	8	0.1	350
GM3VHR	0.1	2000	3000	0.1	0.3	0.5	12	0.1	250
GM4	0.3	60	80	1.5	10	15	10	0.6	300
GM4HS	0.3	250	400	0.4	3	5	25	0.3	120
GM4VHS	0.3	400	650	0.2	0.3	0.5	60	0.2	80
GM4VHR	0.3	900	1600	0.2	0.3	0.5	60	0.15	80
GM5	1	20	40	3	10	15	65	1.5	55
GM5HS	1	60	100	1.5	2	3	300	0.5	10
GM5VHS	1	200	280	0.5	0.3	0.5	2500	0.3	2
GM5VHR	1	330	450	0.5	0.3	0.5	2500	0.3	2
GM6	2	6	12	10	10	15	300	2	17
GM6HS	2	30	60	3	2	3	1200	0.8	1
GM6VHS	2	80	120	1	0.3	0.5	9000	0.4	0.6
GM6VHR	2	120	200	1	0.3	0.5	9000	0.4	0.6
GM7	3	4	8	30	5	10	800	3	4
GM7HS	3	25	35	4	1	3	4000	1	0.7
GM7VHS	3	40	65	3	0.25	0.3	1300	0.6	0.2
GM7VHR	3	65	90	2	0.25	0.3	1300	0.6	0.2
GM8	5	2	4	40	3	5	3000	4	1.6
GM8HS	5	10	15	15	1	3	6000	2	0.5
GM8VHS	5	15	20	5	0.1	0.3	35000	1	0.1
GM8VHR	5	20	30	5	0.1	0.3	35000	1	0.1
GM10HS	10 sq.	2	3.5	50	0.5	1	30000	4	0.1
GM13HS	13	1	2	100	0.5	1	50000	8	0.05
GM5TEC1	1		300	0.2	5	7	85	0.4	55
GM8TEC2	5		60	1	1	2	3000	1	1.6



VHS series: Designed for zero reverse bias applications requiring high shunt resistance.
 VHR series: Designed for zero reverse bias applications.
 HS series: Designed for < 5V reverse bias applications.
 GM series: Designed for high speed applications with reverse bias > 10V.
 TEC series: Mounted on a one- or two-stage thermoelectric cooler for low-noise applications.

Characteristics



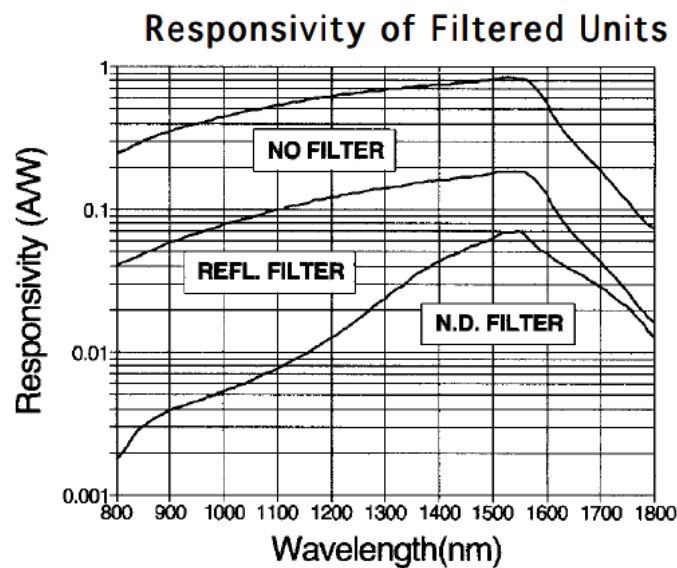
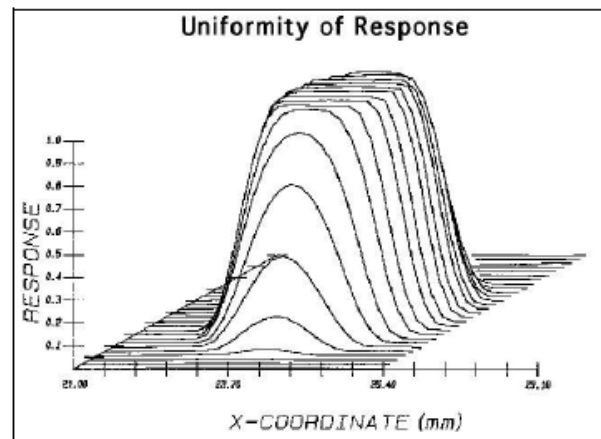
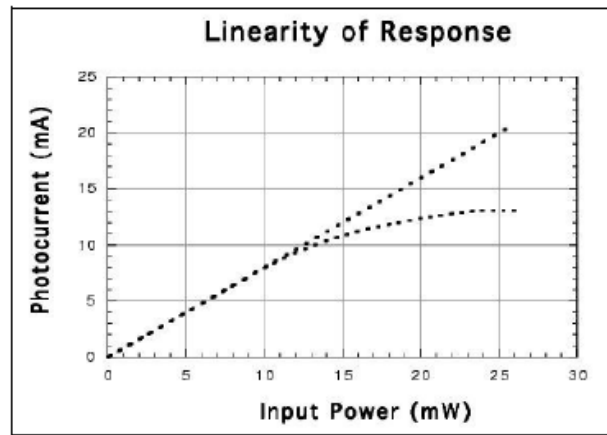
Responsivity vs. Wavelength

Series	WAVELENGTH					
	850		1300		1550	
	min.	typ.	min.	typ.	min.	typ.
GM	.20	.26	.60	.65	.75	.85
GMHS	.20	.26	.60	.70	.75	.85
GMVHS	.20	.26	.60	.70	.80	.85
GMVHR	.26	.32	.70	.80	.82	.87
GEP	.20	.26	.60	.65	.75	.85

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Si / Ge Sandwich Photodiodes

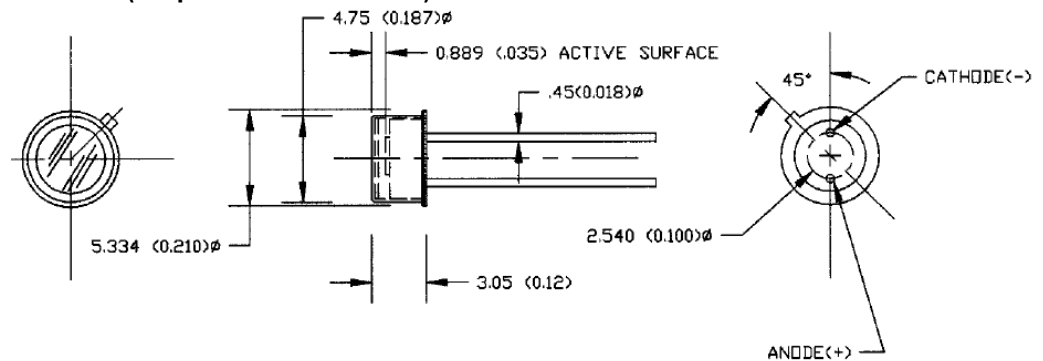
Electro-optical Characteristics

Type	Active Diam. (mm)	Wavelength Range (nm)	Peak Resp. (A/W)	NEP (pW/√Hz)	R_{SHUNT} (K Ω)	Max Reverse Volts (V)	Leakage Current	Forward Voltage (V) $I_{PH}=10mA$
(Si) GM6Si5	5	400-1000	0.5	1.0×10^{-14}	> 1000	30	2 nA	1.1
(Ge)	2	1000-1800	0.6	1.0×10^{-12}	60	3	2 μA	0.45
(Si) GM7Si5	5	400-1000	0.5	1.0×10^{-14}	> 1000	30	2 nA	1.1
(Ge)	3	1000-1800	0.6	1.5×10^{-12}	25	3	3 μA	0.45
(Si) GM8Si5	5	400-1000	0.5	1.0×10^{-14}	> 1000	30	2 nA	1.1
(Ge)	5	1000-1800	0.6	2.0×10^{-12}	10	1.5	10 μA	0.45

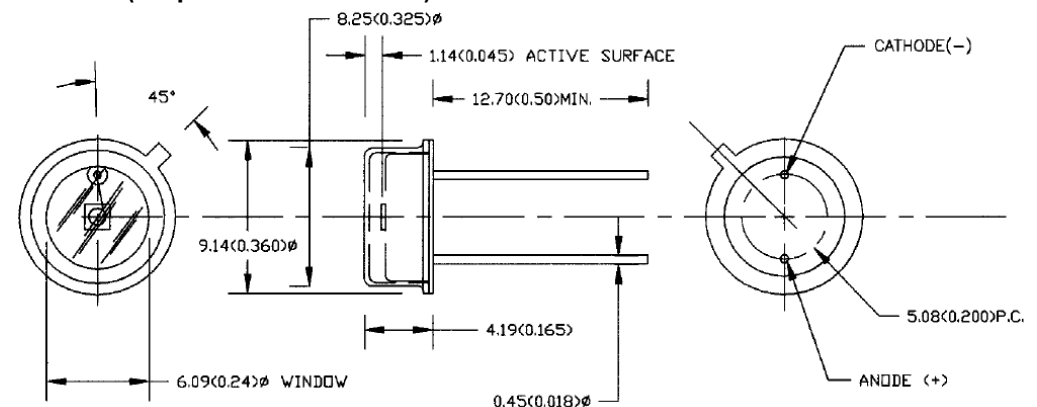
Packages

Dimensions in mm / inches

TO18 (Chip diameter $\leq 2mm$)

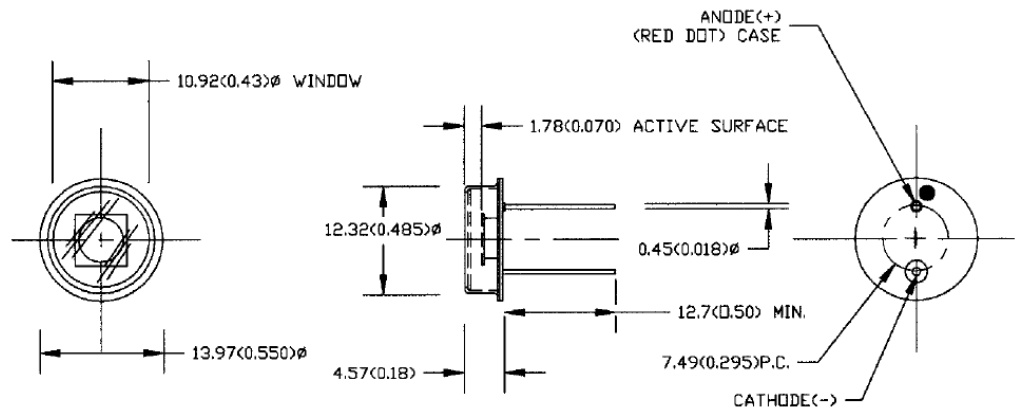


TO5 (Chip diameter $\leq 3mm$)

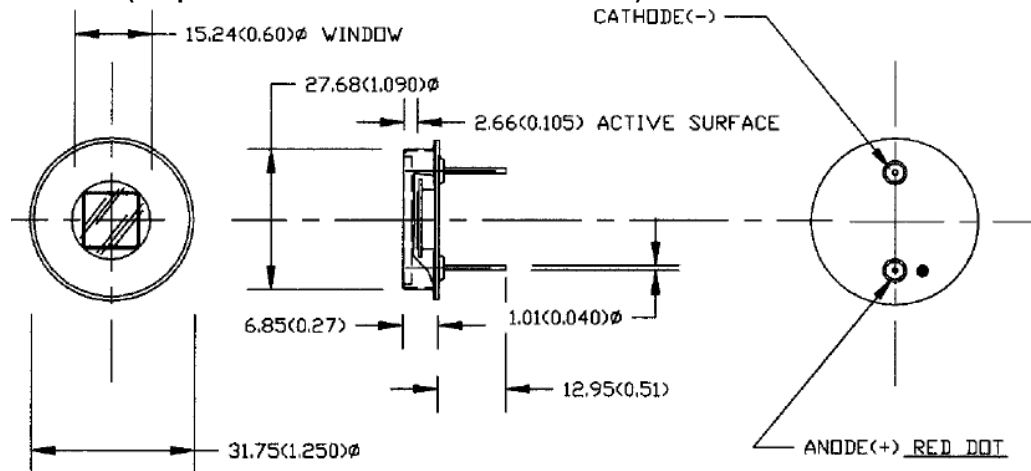




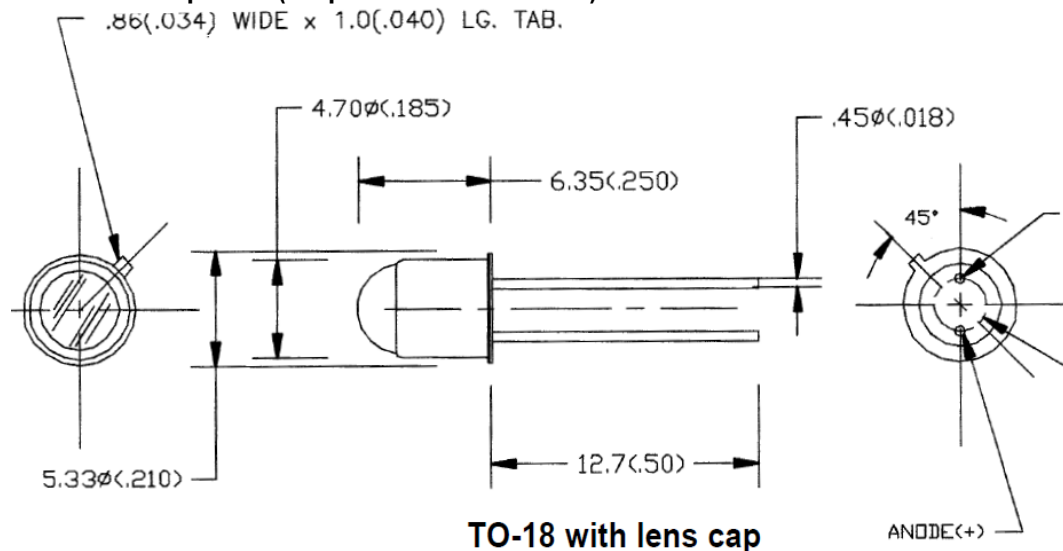
T08 (Chip diameter $\leq 5\text{mm}$)



T09 (Chip diameter 13mm and 10mm x 10mm)

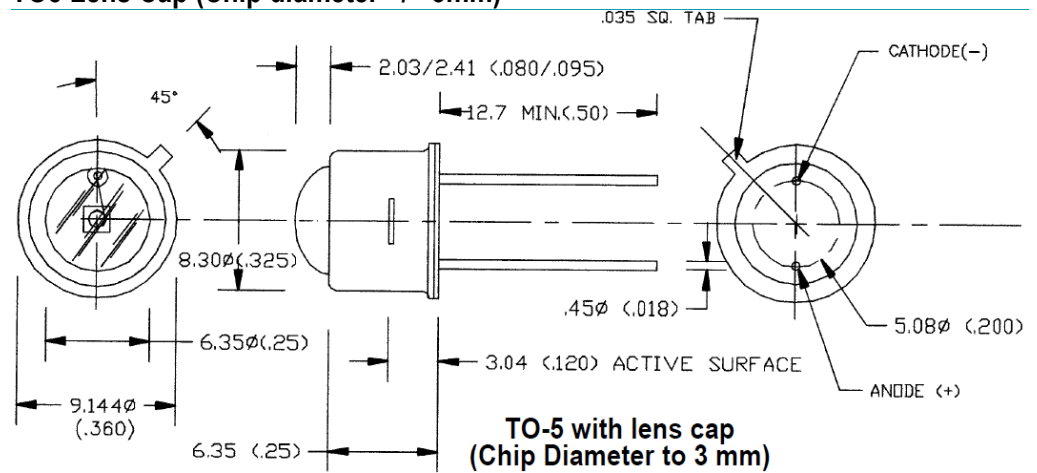


T018 Lens Cap (Chip diameter $\leq 2\text{mm}$)

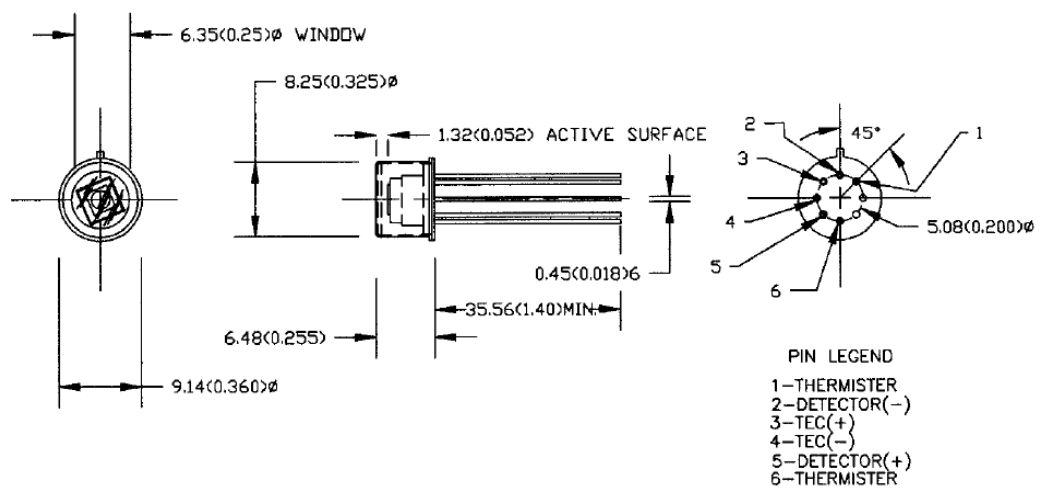




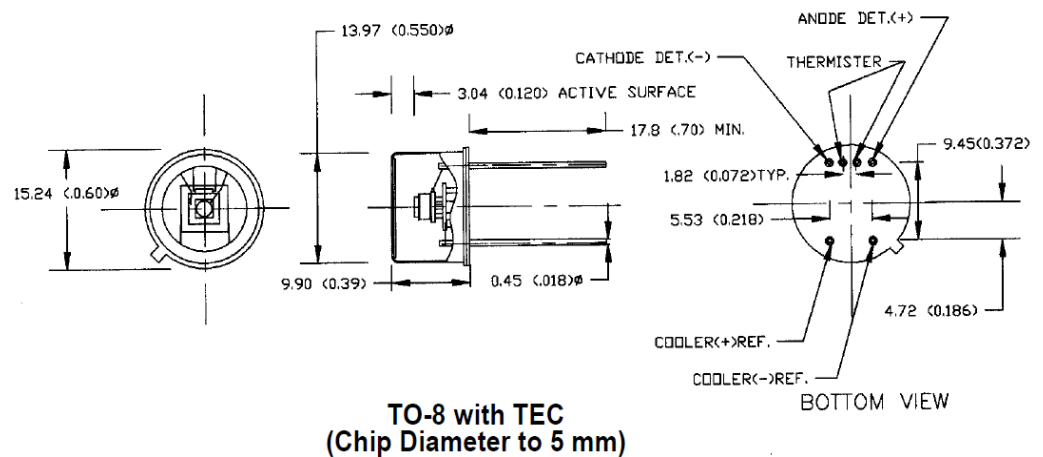
TO5 Lens Cap (Chip diameter ≤ 3 mm)



TO5 with TEC

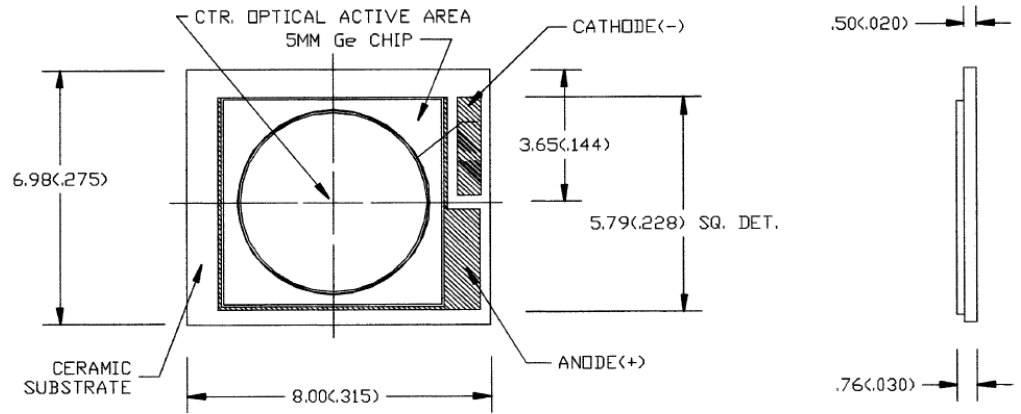


TO8 with TEC

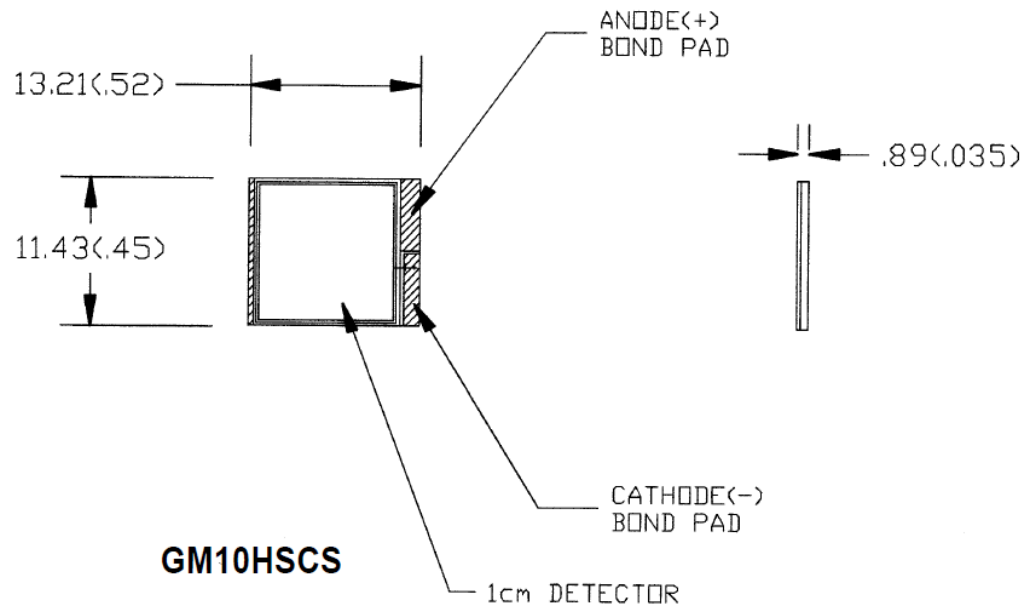




GM8HSCS

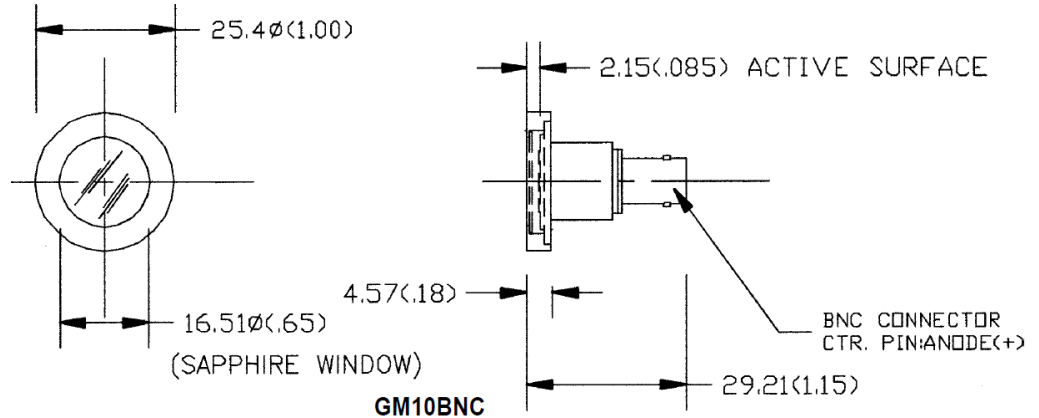


GM10HS



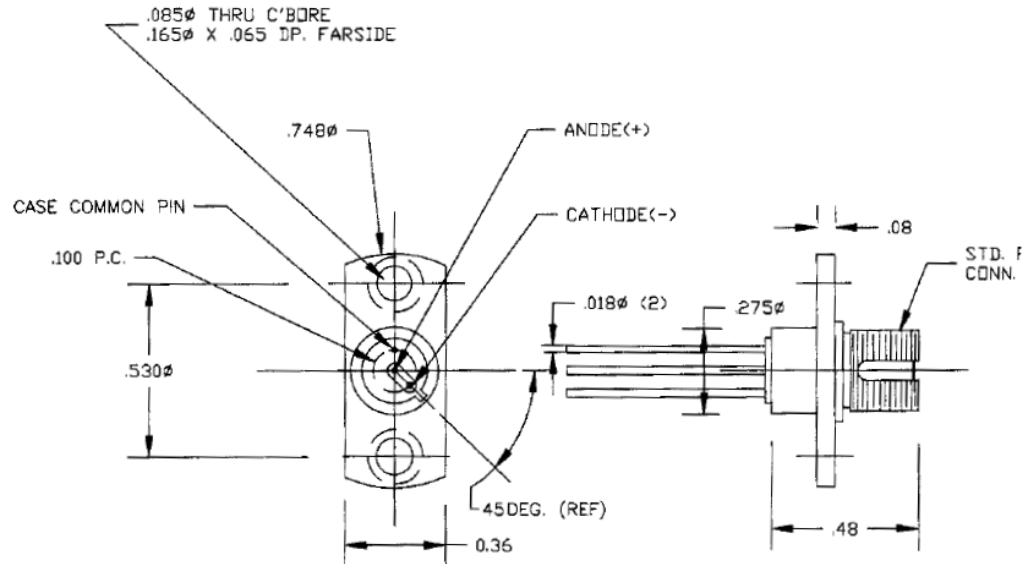
GM10HSCS

GM10HSBNC

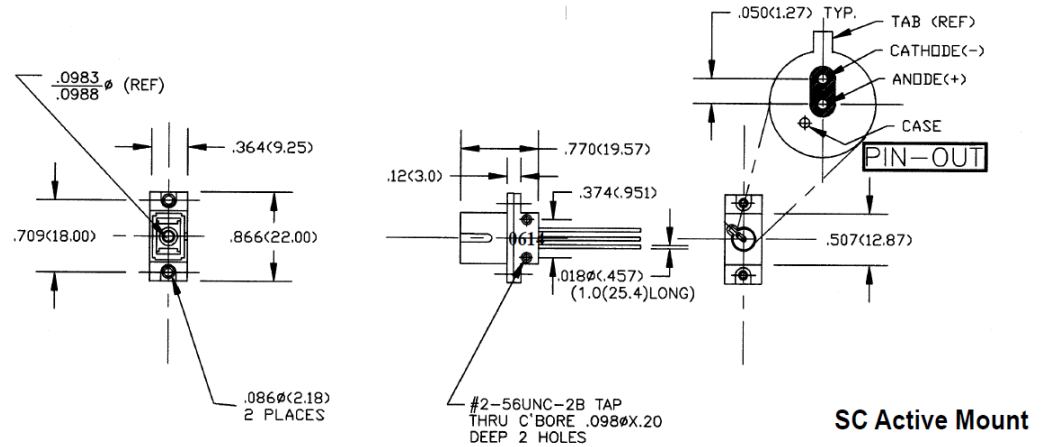




FC Active Mount

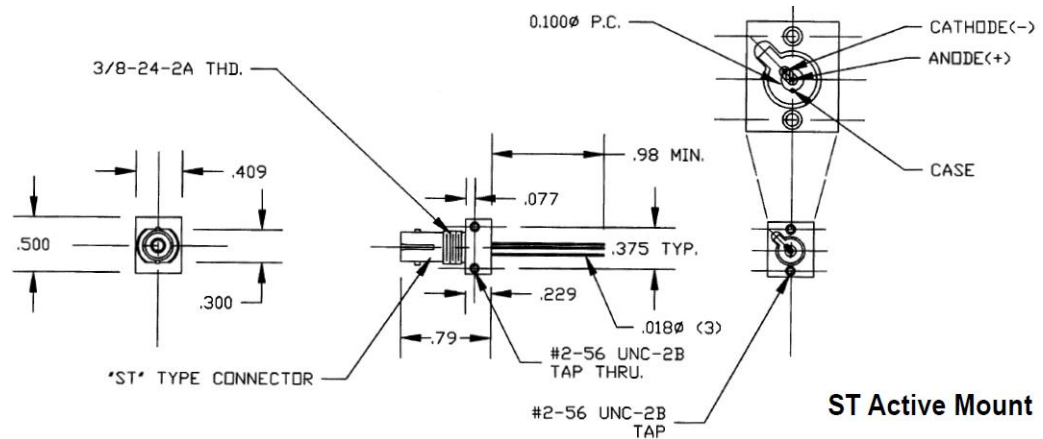


SC Active Mount



SC Active Mount

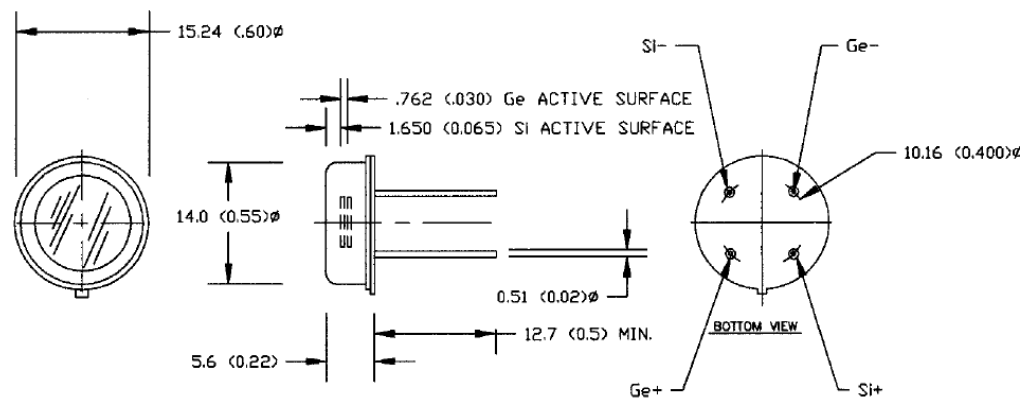
ST Active Mount



ST Active Mount



Si / Ge Sandwich Photodiode



Pigtailed Detector MM

