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Full Data sheet for Series 5T

Company Websites



FM25100



EMS68441

RoHS Info.

Electro Optics

Standard Products

Series Overview

[Home](#) | [Products](#) | [Electro Optics](#) | [Series Overview](#) | Blue sensitive for biased or

unbiased operation

- Spectral Response Graph

- Standard Packages

- Typical Application Areas

- EO Custom Design

- EO Publications

- Radiation Detectors

- Geiger Müller Tubes

- Semiconductor Radiation Detectors

- UV Light Measurements

- Vision Engineering

- Radiation Tolerance

General Purpose Silicon Sensors (Series 5T)

The Centronic **Series 5T** detectors offer high blue

sensitivity coupled with high shunt resistance and low

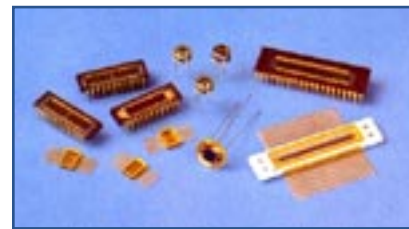
dark leakage current. They are particularly suited to low

light level applications from 430-900 nm where the highest signal to noise ratio is

important. They may be operated photovoltaically or with a reverse bias of up to 12V

where lower capacitance is needed. The 5T range provides the most economic solution

for all applications where high speed of response above 800 nm is not critical.



[Series 5T Spectral Response Graph](#)

[Capacitance versus Bias Voltage](#)

Electrical / Optical Specifications

Characteristics measured at 22°C (± 2) ambient, and a reverse bias of 12 volts, unless

otherwise stated. Shunt Resistance measured at ± 10 mV.

For rise time on Quadrants, Linear and Matrix Arrays take figures for single element

diodes having equivalent active area

Single Elements

NEP										Risetime ns				
Shunt														
Responsivity A/WDark						WHz ^{-½} Capacitance				λ = 820 nm				
Active Area						Resistance								
Type	λ = 436 nm			Current (nA)			λ = pF			RL = 50 Ω				
										Meg. ohms		Package		
No.	436										Typ.			
										nm		Vr=0 V Vr=12V		
mm²mm		Min.	Typ.	Max.	Typ.			Min.	Typ.					
										Typ.	Max.	Max.		
OSD1-5T	1	1.13 dia	0.18	0.21	1	0.2	2.5e-14	35	7	250	1000	7	1	
2.16 x														
OSD3-5T	3		0.18	0.21	2	0.5	3.0e-14	80	20	100	700	9	1	
1.4														
OSD5-5T	5	2.52 dia	0.18	0.21	2	0.5	3.3e-14	130	35	100	600	9	3	
2.75 x														
OSD7.5-5T	7.5		0.18	0.21	3	1	4.6e-14	180	40	60	300	10	3	
2.75														
OSD15-5T	15	3.8 x 3.8	0.18	0.21	5	1	5.5e-14	390	80	50	200	12	3	
OSD35-5T	35	5.9 x 5.9	0.18	0.21	10	2	7.5e-14	950	200	20	100	20	8 / 24	
OSD50-5T	50	7.98 dia	0.18	0.21	15	5	1.6e-13	1300	270	5	25	26	9	
OSD60-5T	62	7.9 x 7.9	0.18	0.21	25	6	2.3e-13	1800	310	3	12	30	9	
OSD100-5T	100	11.3 dia	0.18	0.21	30	8	2.1e-13	2500	520	2	15	45	13	
OSD300-5T	300	19.54	0.18	0.21	200	30	3.5e-13	7500	1500	1	5	125	15	
dia														

Quadrants (Values given are per element unless otherwise stated)

Type	No.	NEP														
		Dark						Shunt								
		Active Area		Responsivity A/W				WHz ^{-½}		Capacitance		Crosstalk%				
		(Total)	λ = 436 nm	Current				λ =	pF	Resistance						
				(nA)		Meg. ohms				λ = 900 nm						
		Sep.				nm		Vr=0 V Vr=12V				Package				
		mm²mm	Min.	Typ.	Max.	Typ.		Min.	Typ.	Max.	Typ.					
		mm					Typ.	Max.	Max.							
QD7-5T	7	2.99	0.2	0.18	0.21	6	2	2.3e-	50	15	80	1200	5	1	7	
		dia						14								
QD50-5T	50	7.98	0.2	0.18	0.21	30	3	4.6e-	330	80	10	300	5	1	10	
		dia						14								
QD100-5T	100	11.3	0.2	0.15	0.18	50	5	7.0e-	650	130	5	100	5	1	11	
		dia						14								

Linear Arrays (Values given are per element unless otherwise stated)

Type	No. of	Responsivity		Shunt		NEP		Dark	
		Array Dimensions		A/W		Resistance		WHz ^{-½} Capacitance pF	
				λ = 436 nm		Megohms		λ = nA	
No.	Elements					436			
		</							

Area WidthLgth.Sep.										Vr=0V Vr=12V				
				Min.	Typ.	Min.	Typ.	nm		Max. Typ.				
mm² mm mm mm										Min.	Typ.			
										2.5e-				
LD2A-5T	2	1.00	2.0	0.5	0.05	0.18	0.21	100	1000	30	6	2	0.7	4
										14				
										2.5e-				
LD2B-5T	2	2.02	1.422	1.422	0.45	0.18	0.21	50	1000	60	12	5	1	4
										14				
										2.9e-				
LD2C-5T	2	0.48	3.27	0.38	0.05	0.15	0.18	100	1000	15	4	2	0.5	2
										14				
										4.0e-				
LD4C-5T	4	0.64	0.8	0.8	0.3	0.15	0.18	40	500	38	10	10	1	6
										14				
										2.0e-				
LD12A-5T	12	0.25	0.5	0.5	0.05	0.15	0.18	100	2000	10	3	5	0.5	21
										14				
										2.0e-				
LD16C-5T	16	0.03	5.2	0.17	5.02	5.15	0.18	100	2000	10	2	5	0.5	20
										14				
										2.0e-				
LD16	16	1.8	2.1	0.9	0.1	0.18	0.21	100	1500	60	11	5	0.5	16
(1.8)-5T										14				
										2.0e-				
LD16	16	2.5	2.5	1	0.5	0.18	0.21	100	1500	80	14	5	0.5	16
(2.5)-5T										14				

														2.5e-
LD20-5T	20	3.60	4.0	0.90	0.05	0.18	0.21	100	1000	130	20	5	0.5	16
														14
														1.7e-
LD20	20	0.36	0.6	0.6	0.1	0.18	0.21	100	2000	15	5	5	0.5	16
														14
(0.36)-5T														
														1.7e-
LD35-5T	35	4.42	4.6	0.96	0.03	0.18	0.21	40	2000	130	25	5	0.5	17
														14
Matrix Arrays (Values given are per element unless otherwise stated)														
														6.4e-
MD25-5T	5 x 5	7.99	2.7	2.7	0.1	0.15	0.18	5	200	240	47	50	5	18
														14

Note: Recommended operating voltage range 0 to 12 volts, for all Series 5T Detectors.

Highlighted items are Centronic standard products generally available from stock

Due to our policy of continued development, specifications are subject to change without notice.