

NEP New England Photoconductor

InGaAs Pin Photodiodes

Part Number	I-.05	I-.10	I-.30	I-.50
Active Area Diameter um	50	100	300	500
Responsivity @ 1300nm A/W Min/Typ	0.80/0.90	0.80/0.90	0.80/0.90	0.80/0.90
1550nm A/W Min/Typ	0.90/0.95	0.90/0.95	0.90/0.95	0.90/0.95
Dark Current @ 5V nA Max/Typ	.07/.03	1.0/.05	5.0/1.0	25/5
Capacitance @ 5V pF Max/Typ	0.6/0.4	1.2/1.0	8.0/4.0	40@0V
Bandwidth 50Ω-3dB GHz Min @5V	2.6	2.0	0.7	0.20
Rise/Fall time RL= 50Ω ns Max @ 5V	0.08	0.1	0.25	0.50
NEP @ 1550nm W/√Hz Typ	1.0E-15	1.5E-15	5E-15	8E-15
Storage Temperature °C	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Operating temperature °C	-40 to 85	-40 to 85	-40 to 85	-40 to 85
Reverse Voltage V	25	25	25	20
Reverse Current mA	1	10	10	10
Forward Current mA	10	10	10	10
Package Options * (Note)	CH-CE-46-46L	CH-CE-46-46L	CH-CE-46-46L	CH-CE-46-46L

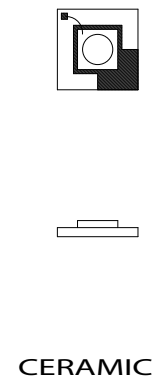
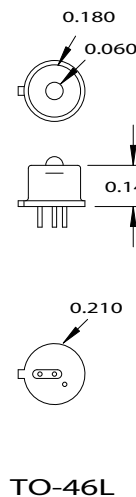
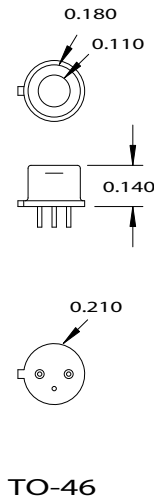
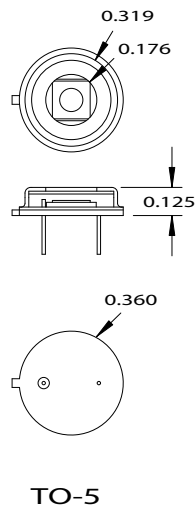
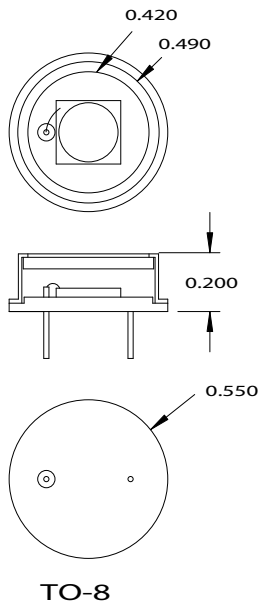
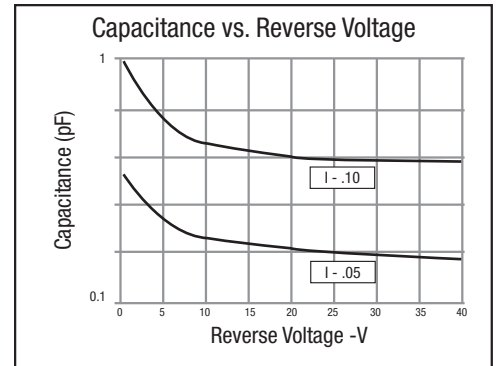
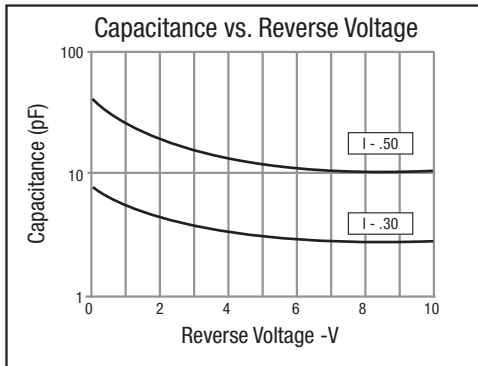
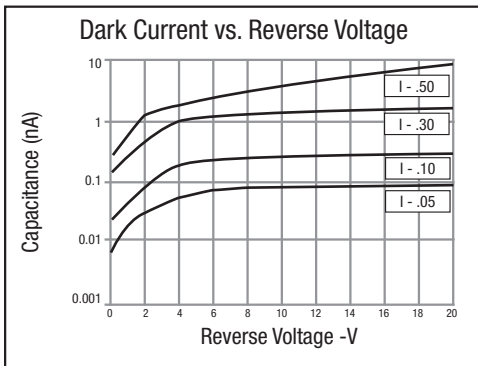
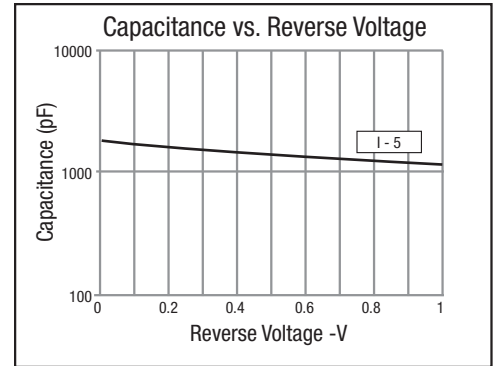
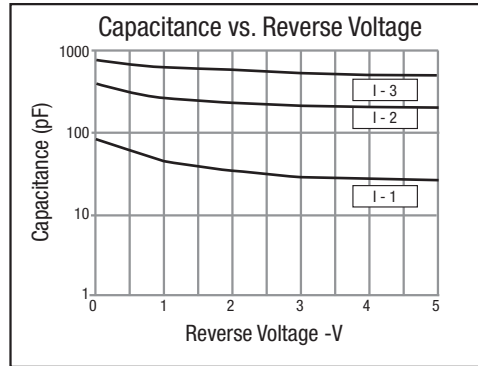
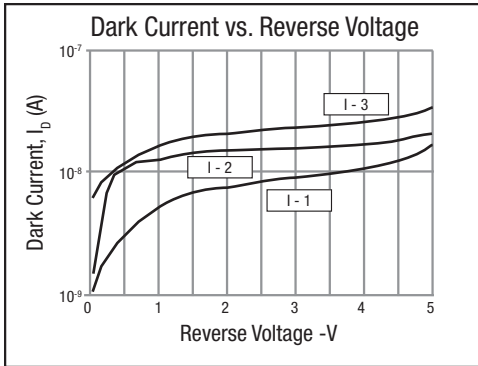
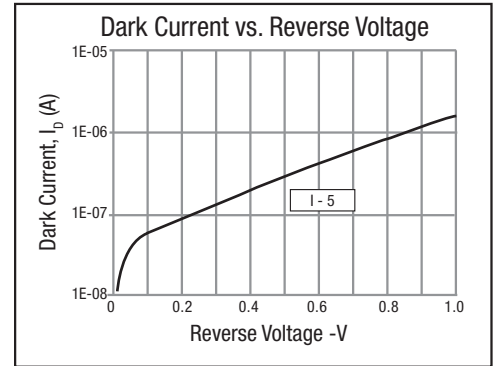
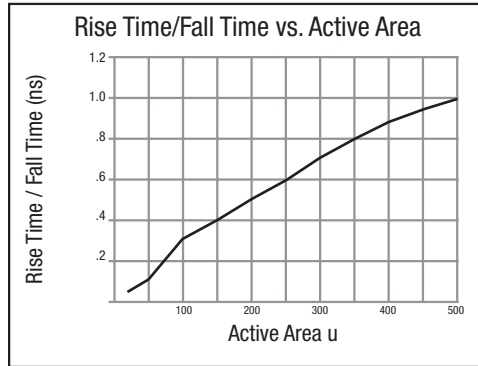
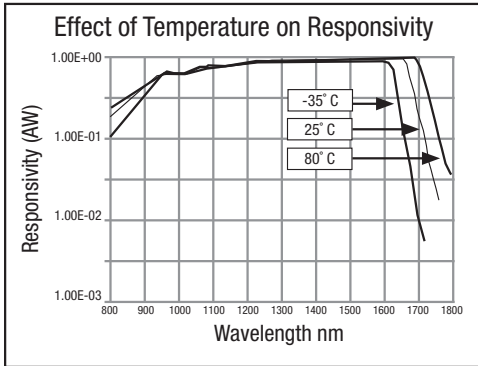
Part Number	I-1	I-2	I-3	I-5
Active Area Diameter mm	1.0	2.0	3.0	5.0
Responsivity @ 1300nm A/W Min/Typ	0.80/0.90	0.80/0.90	0.80/0.90	0.80/0.90
1550nm A/W Min/Typ	0.90/0.95	0.90/0.95	0.90/0.95	0.90/0.95
Dark Current nA Max/Min	100/25 @5V	200/50 @1V	500/200 @1V	5000 @0.3V
C @ 0V pF Max/Min	120/80	500/300	1000/600	1500/1000
C pF Max/Min	50/30 @-5V	150/100@-3V	300/250@-2V	3000/2000
Bandwidth 50Ω-3dB Ghz	40@5V	5.3@0V	4.0@0V	1@0V
T, RL= 50Ω ns Typ	5.0@5V	50@0V	100@0V	300@0V
Res, MΩ Min/Typ	10/50	6/30	2.0/8	0.025/0.050
NEP @1550 nm W/√Hz Typ	.01	.03	.05	.28
Linear Range (±0.2dB) dBm	10	8	8	8
Storage Temperature °C	-40 to 125	-40 to 125	-40 to 125	-40 to 125
Operating Temperature °C	-40 to 85	-40 to 85	-40 to 85	-40 to 85
Reverse Voltage V	20	3	2	2
Reverse Current mA	10	10	10	10
Forward Current mA	10	10	10	10
Power Dissipation mW	100	50	50	50
Package Options * (Note)	CH-CE-46-46L	CH-CE-5	CH-CE-5	CH-CE-8

NOTE: * CH = Chip CE = Ceramic Carrier 46 = TO46 Hermetic Package 46L TO46 Hermetic Lens Package
5 = TO5 Hermetic Package 8 = TO8 Hermetic Package ~ Custom filters, windows and packages are available



NEP New England Photoconductor

InGaAs Pin Photodiodes



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Extended InGaAs Photodiodes

ROOM TEMPERATURE

Part Number	IE6-.5	IE6-1	E6-2
Active Area Diameter um	500	1000	2000
Responsivity @ 2300nm A/W Min/Typ	0.9/1.3	0.9/1.3	0.9/1.3
Dark Current @ 1V nA Max/Typ	5/50	15/75	75/100
Capacitance @ 1V pF	60	200	800
Shunt Resistance @ 1V Kohms	15	3	1
D*(cm.Hz ^{1/2} /W)	5x10 ¹⁰	5x10 ¹⁰	5x10 ¹⁰
NEP (W/Hz ^{1/2})	1x10 ⁻¹²	2x10 ⁻¹²	5x10 ⁻¹²
Spectral Range Microns	1.2-2.6	1.2-2.6	1.2-2.6
Cut-Off Frequency @1V -3dB(MHz)	50	15	5
Test Temperature °C	25	25	25
Storage Temperature °C	-40 to 125	-40 to 125	-40 to 125
Package Options *(Note)	4-5	4-5	4-5

NOTE:

* 4 = TO46 Package, 5 = TO5 Package
 Custom filters, windows and packages are available

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