

# NEP New England Photoconductor

## Thermoelectrically Cooled InGaAs Photodiodes

Part Number	IC1-1	IC1-2	IC1-3	IC1-5
Active Area Diameter mm	1	2	3	5
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
NEP @ 1550nm W/√Hz Typ	5.0E-15	1.0E-14	2.0E-14	3.0E-14
Dark Current nA @ 1V Typ/Max	0.07/0.35	0.3/1.5	1.0/5.0	2.5/12.5
Capacitance pF @ 1V	150	550	1000	3500
Cut-Off Frequency @ 1V MHz	18	4	2	0.6
Shunt Resistance M ohms	1500	300	100	30
Reverse Voltage Max	5	5	5	2
Storage Temperature °C	-55 to 85	-55 to 85	-55 to 85	-55 to 85
Test temperature °C	-10	-10	-10	-10
Cooler Power Max	1.0V@2.0A	1.0V@2.0A	1.0V@2.0A	2V@1.3A
Package Options * xx	5,7	5,7	5,7	8,6
Thermistor @ 25°C**	1K	1K	1K	1K

Part Number	IC2-1	IC2-2	IC2-3	IC2-5
Active Area Diameter mm	1	2	3	5
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
NEP @1550 nm W/√Hz Typ	3E-15	7E-15	1E-14	2E-14
Dark Current nA @ 1V Typ/Max	0.03/0.15	0.15/0.75	0.5/2.5	1.2/6.0
Capacitance pF @ 1V	150	550	1000	3500
Cut-Off Frequency @ 1V MHz	18	4	2	0.6
Shunt Resistance M ohms	3000	600	200	60
Reverse Voltage Max	5	5	5	5
Storage Temperature °C	-55 to 85	-55 to 85	-55 to 85	-55 to 85
Test Temperature °C	-20	-20	-20	-20
Cooler Power Max	0.8V@1.3A	0.8V@1.3A	0.8V@1.3A	1.9V@1.4A
Package Options * xx	5,7	5,7	5,7	8,6
Thermistor @ 25°C**	1K	1K	1K	1K

NOTE: \* Other Packages are available \*\* Other Thermistors are available xx Band Pass Filters are available



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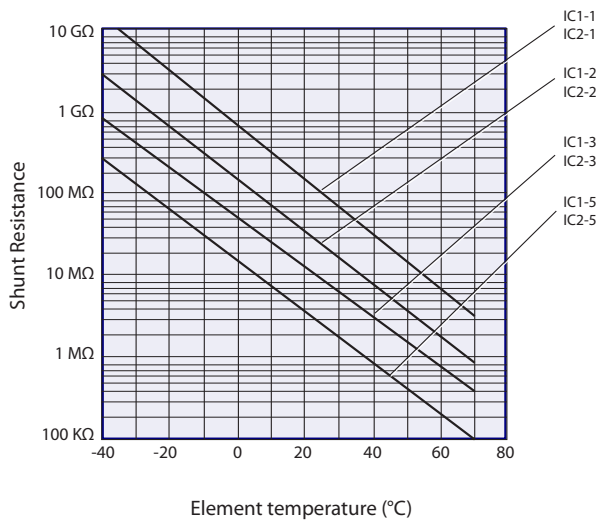
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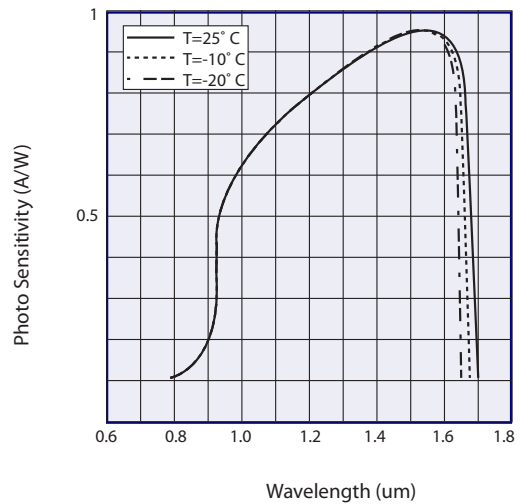
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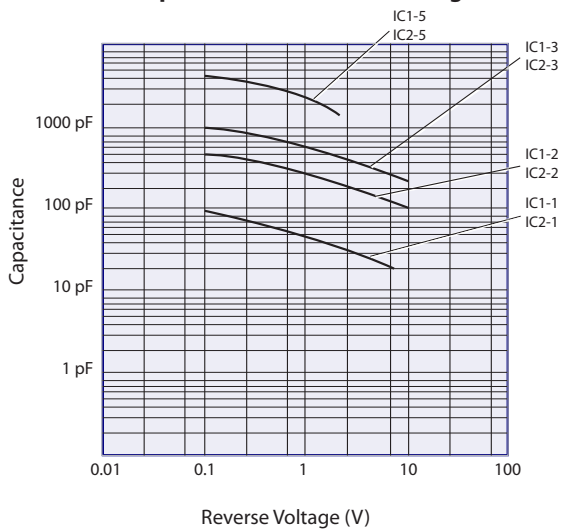
**Shunt Resistance vs. Temperature**



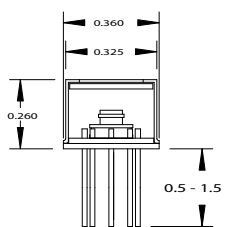
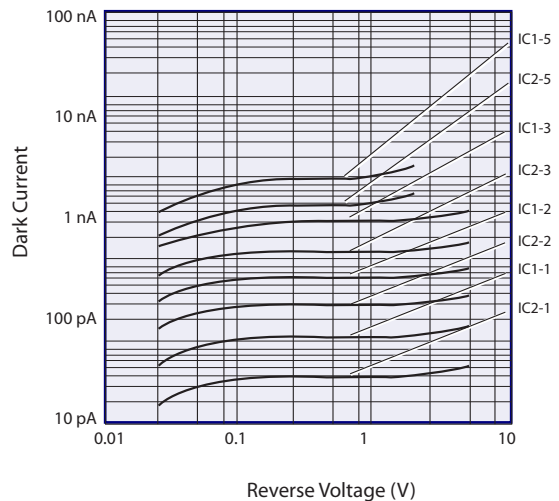
**Spectral Response**



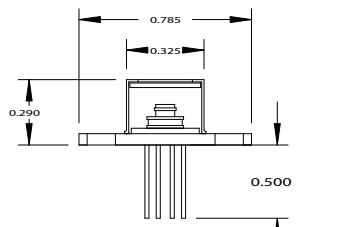
**Capacitance vs. Reverse Voltage**



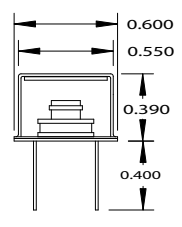
**Dark Current vs. Reverse Voltage**



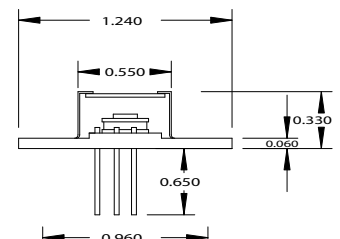
TO-5



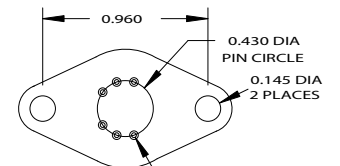
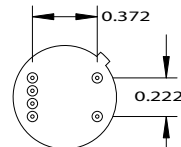
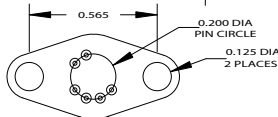
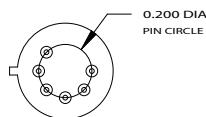
TO-37



TO-8



TO-66



# NEP New England Photoconductor

## Extended InGaAs Photodiodes

### THERMOELECTRICALLY COOLED 1 STAGE

Part Number	IE6C1-.5	IE6C1-1	IE6C1-2
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	.5/4	1.5/7.5	7.5/40
Capacitance @ 1V pF	60	200	800
Shunt Resistance @ 1V Kohms	15	3	1
D*(cm.Hz <sup>1/2</sup> /W)	1x10 <sup>11</sup>	1x10 <sup>11</sup>	1x10 <sup>11</sup>
NEP (W/Hz <sup>1/2</sup> )	4x10 <sup>-13</sup>	7x10 <sup>-13</sup>	1x10 <sup>-12</sup>
Spectral Range Microns	1.2-2.57	1.2-2.57	1.2-2.57
Cut-Off Frequency @1V -3dB(MHz)	50	15	5
Test Temperature °C	-10	-10	-10
Storage Temperature °C	-40 to 125	-40 to 125	-40 to 125
Package Options *(Note)	5-7-6-8	5-7-6-8	5-7-6-8

### THERMOELECTRICALLY COOLED 2 STAGE

Part Number	IE6C2-.5	IE6C2-1	IE6C2-2
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	.2/.5	.8/4	4/50
Capacitance @ 1V pF	60	200	800
Shunt Resistance @ 1V Kohms	400	60	20
D*(cm.Hz <sup>1/2</sup> /W)	2x10 <sup>11</sup>	2x10 <sup>11</sup>	2x10 <sup>11</sup>
NEP (W/Hz <sup>1/2</sup> )	3x10 <sup>-13</sup>	5x10 <sup>-13</sup>	9x10 <sup>-13</sup>
Spectral Range Microns	1.2-2.55	1.2-2.55	1.2-2.55
Cut-Off Frequency @1V -3dB(MHz)	50	15	5
Test Temperature °C	-20	-20	-20
Storage Temperature °C	-40 to 125	-40 to 125	-40 to 125
Package Options *(Note)	5-7-6-8	5-7-6-8	5-7-6-8

NOTE:

\* 5 = TO5 Package, 6 = TO66 Package, 7 = TO37 Package, 8 = TO8 Package  
 Custom filters, windows and packages are available

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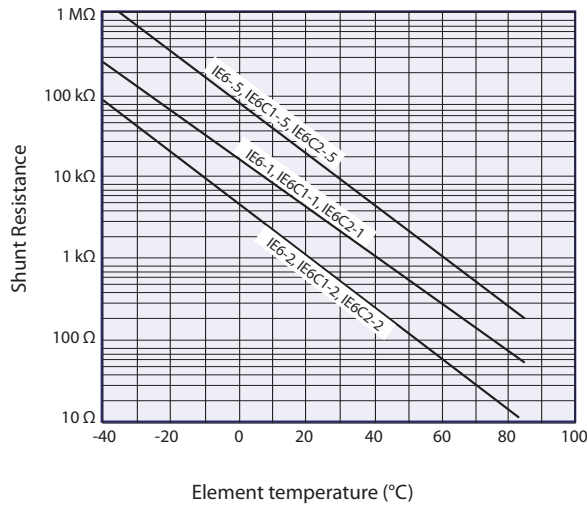
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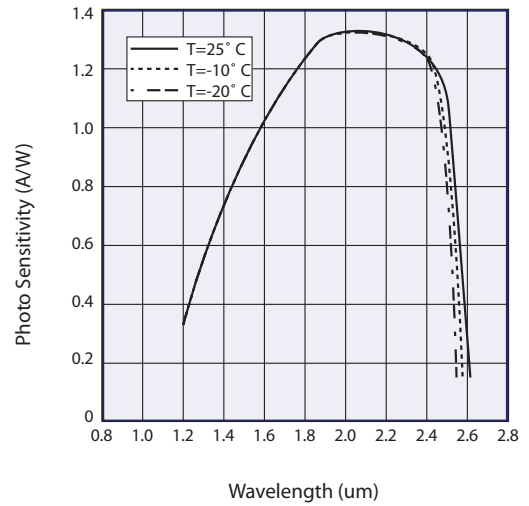
# NEP New England Photoconductor

## Thermoelectrically Cooled Extended InGaAs Photodiodes

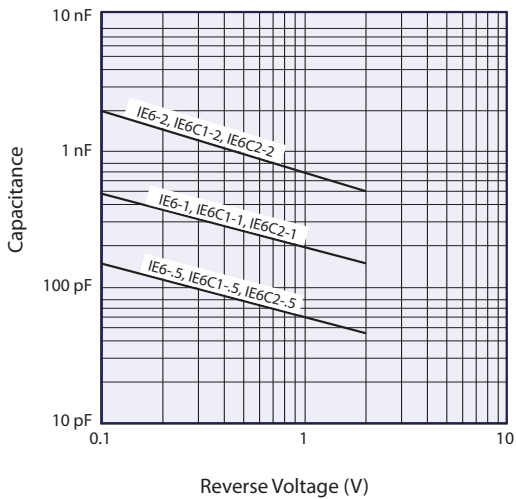
**Shunt Resistance vs. Element Temperature**



**Spectral Response**



**Capacitance vs. Reverse Voltage**



**Dark Current vs. Reverse Voltage**

