

UV Series

Features

- Planar Diffused Structure
- Oxide Passivated
- Wide Spectral Range
- Flat Noise Spectrum to DC
- Linearity Over Wide Dynamic Range
- Peak Responsivity: 0.62 A/W at 900 Nanometers
- UV Responsivity: 0.14 A/W at 254 Nanometers
- Low Noise

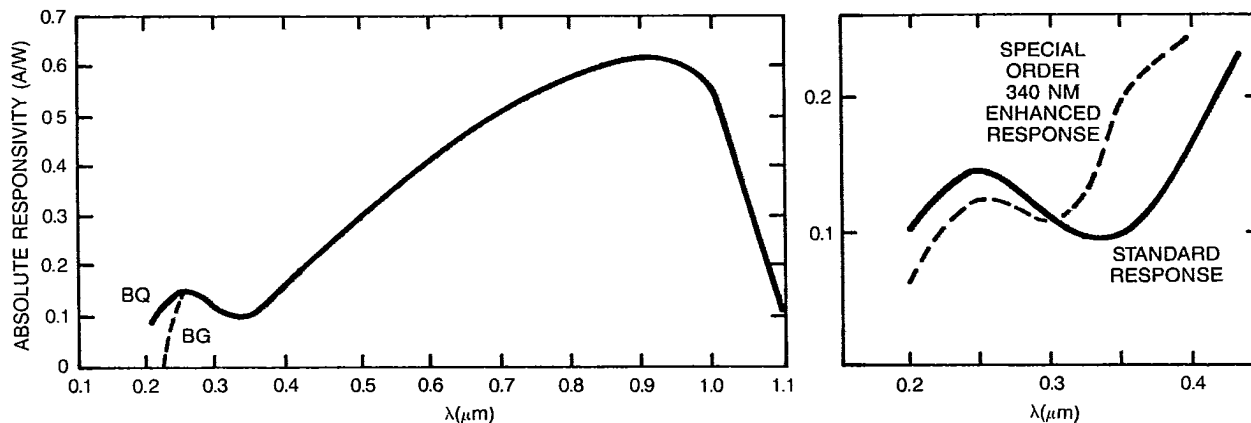
Operating Data and Specifications at 23°C: Typical Performance at 0 V Bias

Characteristic	UV-040BG UV-040BQ	UV-100BG UV-100BQ	UV-215BG UV-215BQ	UV-250BG UV-250BQ	UV-360BG UV-360BQ	UV-444BQ	Units
Active Area	0.81	5.1	23.4	21.1	36.0	100	Sq. mm
Spectral Range ¹	← 250-1150 → ← 185-1150 →						nm
Responsivity	0.62	0.62	0.62	0.62	0.62	0.62	A/W at 900
Responsivity	0.14	0.14	0.14	0.14	0.14	0.14	A/W at 254
Responsivity ²	0.08	0.08	0.08	0.08	0.08	0.08	A/W at 200
Capacitance	25	150	700	630	1100	2800	Picofarads
Shunt Resistance	>500	>100	>50	>75	>20	>10	Megohms
Noise Current	6	15	20	18	28	40	10 ⁻¹⁵ Amps/Hz ^{1/2}
NEP (900,10,1)	1.0	2.5	3.0	2.8	4.3	6.2	10 ⁻¹⁴ W/Hz ^{1/2}
NEP (200,10,1)	7.5	18	25	23	35	50	10 ⁻¹⁴ W/Hz ^{1/2}
Response Linearity	← <1% →						Over 7 decades
Surface Uniformity	← 1% →						With 0.13 mm Spot 633 nr
Temperature Coefficient of:							
Response (900 nm)	← +0.03 →						%/°C
Response (350 nm)	← -0.01 →						%/°C
Response (200 nm)	← -0.13 →						%/°C
Shunt Resistance	← -12 →						%/°C
Operating Temperature	← -55 to +125 (BG) →						°C
	← -55 to +70 (BQ) →						°C
Package Style	TO-5	TO-5	TO-8	TO-5	TO-8	TO-36	

Notes

- Spectral range 185-1150 nm applies to units with BQ suffix, 250-1150 nm for units with BG suffix.
- Applicable only to units with BQ suffix.

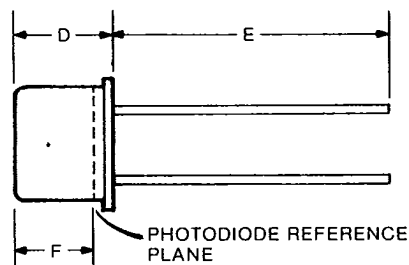
Typical Spectral Response



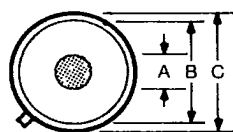
UV Enhanced

Mechanical Data and Pin Configurations

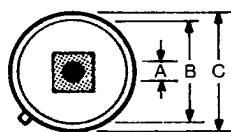
UV-040, 100, 215, 250, 360, 444



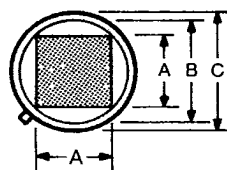
Dimension (mm)	040	100	215	250	360	444
A (Active Area)	1.0	2.5	5.5	4.6	6.0	11.3
B	8.3	8.3	12.3	8.3	12.6	27.8
C	9.0	9.0	13.8	9.0	14.6	31.8
D	4.2	4.2	4.6	4.2	5.7	7.1
E	>19	>19	>19	>19	>19	12.3
F	2.3	2.3	3.0	2.3	3.9	6.1
Pin Circle Radius	2.5	2.5	3.8	2.5	5.3	9.5
Window Thickness	1.0	1.0	1.0	1.0	1.0	1.6
Window Diameter	6.0	6.0	10.9	6.0	9.5	20.7



UV-100,444



UV-040,215

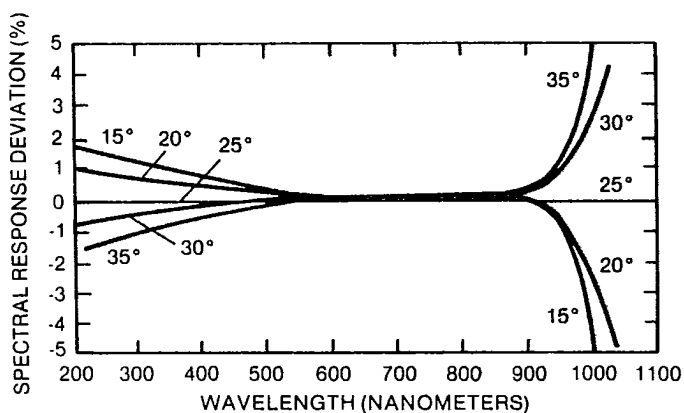


UV-250,360

Notes

1. Only UV-100 and UV-444 packages have apertures.
2. Only UV-040, UV-100, and UV-250 packages have tabs.
3. UV-250 and UV-360 active areas are square.

Typical deviation of responsivity with temperature



Typical shunt resistance change with temperature

