HUV Series (1100BG; 1100BQ; 2000B; 4000B)

T-41-67

Features

- Built-in Low Noise Amplifier
- Groundable Case
- Shielded Amplifier
- Large Active Area
- Wide Spectral Range
- Oxide Passivated Structure

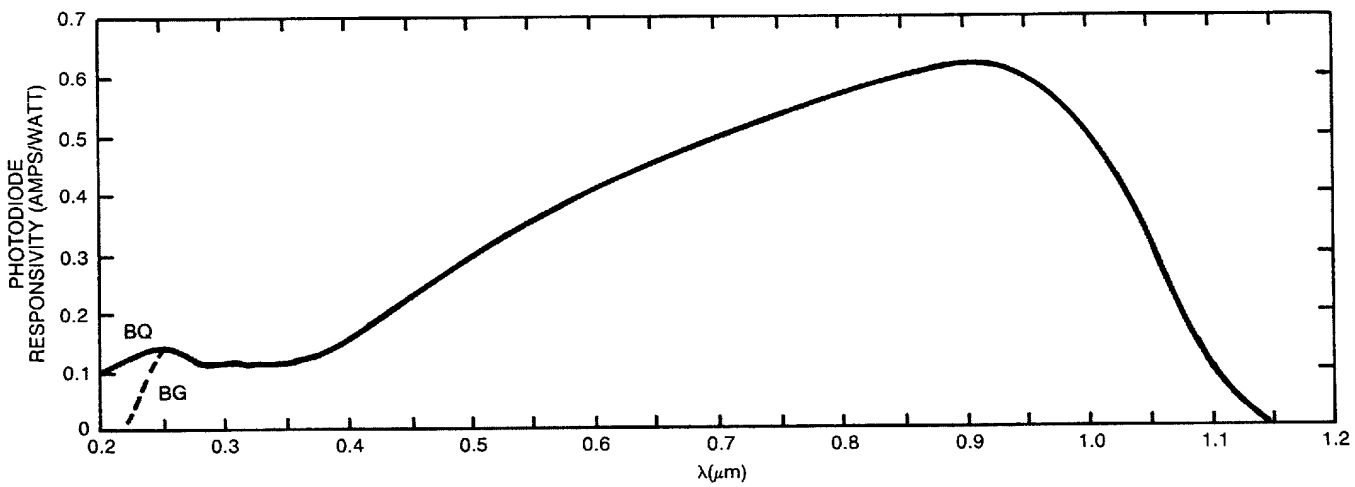
Operating Data and Specifications at 23°C
Typical Performance at 0 V Bias (Photodiode) and ±15 V (Amplifier)

Characteristic	HUV-1100BQ	HUV-2000B	HUV-4000B	Units
Active Area	5.1	23.4	100	Sq. mm
Spectral Range[1]	←	185-1150	→	nm
Responsivity at 900 nm	130	130	130	10^6 V/W; R_f = 200 Megohms
Responsivity at 254 nm	28	28	28	10^6 V/W; R_f = 200 Megohms
Responsivity at 200 nm	16	16	16	10^6 V/W; R_f = 200 Megohms
Frequency Range[3]	DC-5	DC-0.1	DC-0.1	MHz
Noise Voltage at 20 Hz	4	9	9	10^{-6} V/Hz$^{1/2}$;
NEP (900,20,1)	0.03	0.07	0.07	10^{-12} W/Hz$^{1/2}$
NEP (254,20,1)	0.14	0.32	0.32	10^{-12} W/Hz$^{1/2}$
NEP (200,20,1)[2]	0.25	0.56	0.56	10^{-12} W/Hz$^{1/2}$
Open Loop Gain	2	4	4	10^5
Bias Current[4]	30	15	15	pA at 25°C
Offset Current	3	5	5	pA
Offset Voltage[5]	3	3	3	mV
Offset Voltage Drift	5	10	10	10^{-6} V/°C
Output Resistance	250	500	500	Ohms
Slew Rate	12	0.5	0.5	V/10^{-6}S
Supply Voltage	±5 to ±18	±12 to ±18	±12 to ±18	Volts
Supply Current	5	2.2	2.2	mA at ±15 V
Power Consumption	150	30	30	mW at ±15 V
Operating Temperature	←	0 to 70	→	°C

Notes

1. Spectral range 185-1150 nm applies to units with B or BQ suffix, 250-1150 nm for units with BG suffix.
2. Does not apply to units with BG suffix.
3. Gain bandwidth product
4. Doubles every +10 °C.
5. Adjustable to 0 volts with external trim potentiometer.

Typical Spectral Response



EG&G JUDSON
221 COMMERCE DRIVE MONTGOMERYVILLE PA 18936 • USA
TEL (215) 368-6900 • FAX (215) 362 6107

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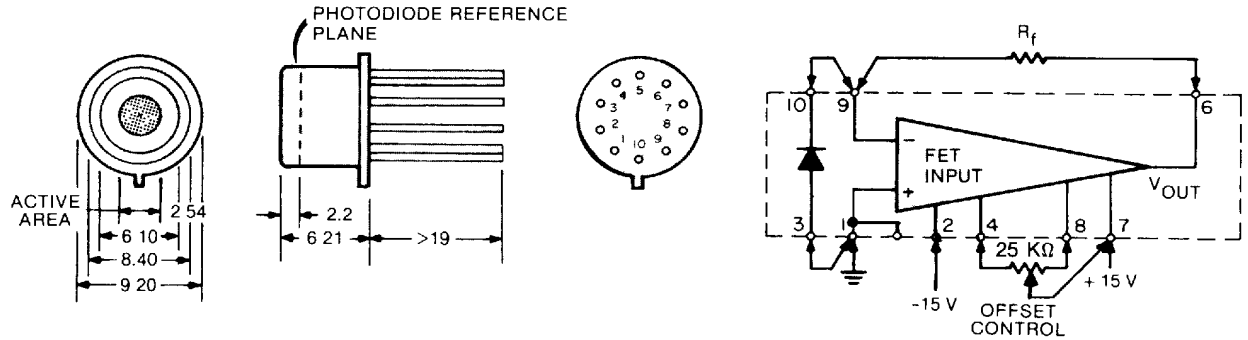
Operational Amplifier/ Photodiode Combinations

Mechanical and Electrical Data

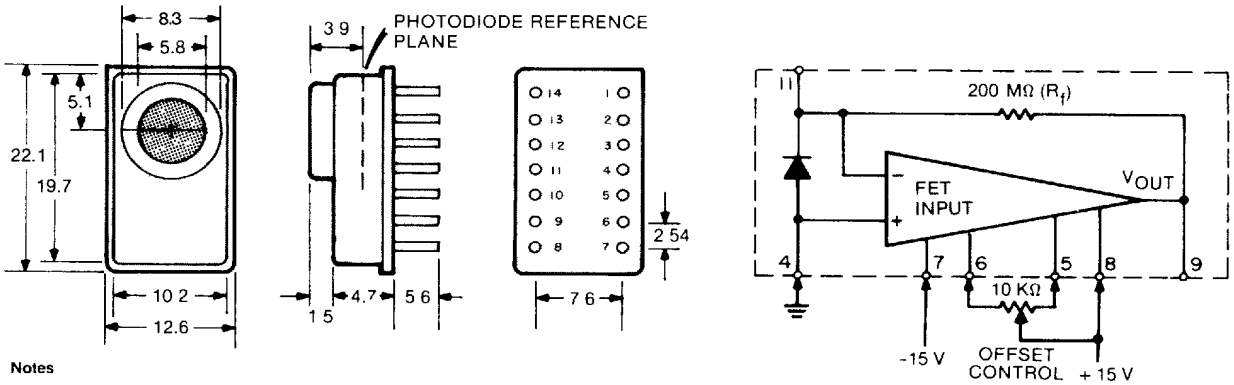
HUV-1100BQ(BG)



Notes

1. 25 KΩ offset voltage controls optional.
2. All dimensions in millimeters.
3. Distance of outer window to active surface is 1.98 mm nominal.
4. Pin circle is 5 84 mm diameter.

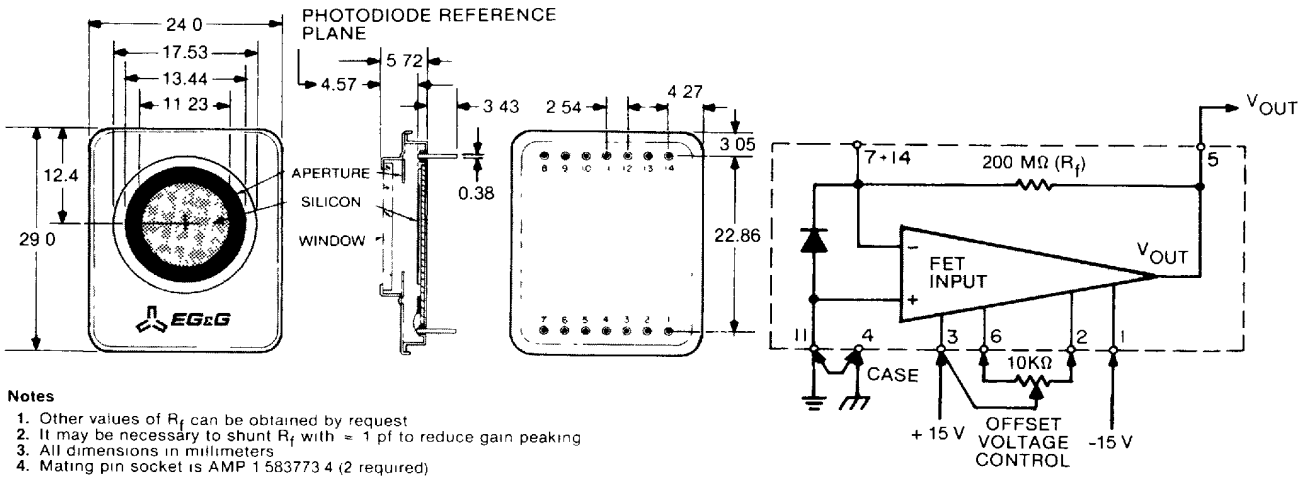
HUV-2000B



Notes

1. Other values of R_f can be obtained by request
2. It may be necessary to shunt R_f with ≈ 1 pf to reduce gain peaking
3. All dimensions in millimeters

HUV-4000B



Notes

1. Other values of R_f can be obtained by request
2. It may be necessary to shunt R_f with ≈ 1 pf to reduce gain peaking
3. All dimensions in millimeters
4. Mating pin socket is AMP 1 583773 4 (2 required)

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