

INFRARED EMITTING DIODES

■ MODEL: BIR-Bxxx1, BIR-Bxxx4, BIR-Bxxx4-1, BIR-Fxxx1, BIR-Nxxx1.

■ APPLICATIONS

• Remote Control • Photo Detector • Smoke Detector • Automatic Control System

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

- Peak Forward Current (Pulse Width = 10µs, 1% Duty Cycle)
- Operating Temperature Range (-45°C to +100°C)
- Storage Temperature Range (-45°C to +100°C)
- Lead Soldering Temperature (1/16 inch from case 5sec @ 250°C)

■ ELECTRICAL AND RADIANT CHARACTERISTICS (Ta=25°C)

Package	Part No.	Chip		Lens	Absolute Maximum Ratings					Electro-optical Data (At 100mA)					Ifp=20mA PW=10µs DC=10%		Viewing Angle 2θ 1/2 (deg)	Drawing No.
		Material	Peak Wave Length λ P(nm)		Δλ (nm)	Pd (mW)	Continuous If (mA)	Peak If (A)	Vr (V)	Vf (V) Typ.	Vf (V) Max.	Ir (µA)	Radiant Power Min.	Radiant Power Typ.	Tr (ns)	Tf (ns)		
T-1 Standard 1.0" Lead 3φ	BIR-BL731	GaAs	940	Blue Trans	50	150	50	1.0	5	1.4	2.0	100	5	10	500	200	18	IR-01
	BIR-BM731	GaAlAs	940	Blue Trans	50	150	50	1.0	5	1.5	2.0	100	7	12	500	200	18	
	BIR-BN731	GaAlAs	880	Blue Trans	50	150	50	1.0	5	1.7	2.0	100	10	15	500	200	18	
	BIR-BO731	GaAlAs	840	Blue Trans	50	150	50	1.0	5	1.7	2.0	100	12	20	500	200	18	
T-1 3/4 Standard 1.0" Lead 5φ	BIR-BL734	GaAs	940	Blue Trans	50	150	50	1.0	5	1.4	2.0	100	7	12	500	200	20	IR-02
	BIR-BM734	GaAlAs	940	Blue Trans	50	150	50	1.0	5	1.5	2.0	100	9	14	500	200	20	
	BIR-BN734	GaAlAs	880	Blue Trans	50	150	50	1.0	5	1.7	2.0	100	12	17	500	200	20	
	BIR-BO734	GaAlAs	840	Blue Trans	50	150	50	1.0	5	1.7	2.0	100	14	25	500	200	20	
T-1 3/4 5φ	BIR-BL734-1	GaAs	940	Blue Trans	50	150	50	1.0	5	1.4	2.0	100	6	12	500	200	40	IR-03
	BIR-BN734-1	GaAlAs	880	Blue Trans	50	150	50	1.0	5	1.7	2.0	100	12	20	500	200	40	
TO-18 5.4φ	BIR-FL3E1	GaAs	940	Water Clear	50	150	50	1.0	5	1.4	2.0	100	8	10	500	200	10	IR-04
	BIR-FN7E1	GaAlAs	880	Blue Trans	50	150	50	1.0	5	1.7	2.0	100	8	10	500	200	10	
Side Viewing	BIR-NL3C1	GaAs	940	Water Clear	50	150	50	1.0	5	1.4	2.0	100	6	9	500	200	40	IR-05
	BIR-NL7C1	GaAs	940	Blue Trans	50	150	50	1.0	5	1.4	2.0	100	6	9	500	200	40	
	BIR-NL3C1-Y	GaAs	940	Yellow Trans	50	150	50	1.0	5	1.4	2.0	100	6	9	500	200	40	

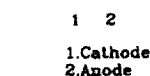
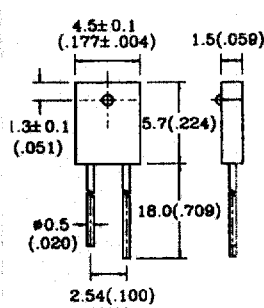
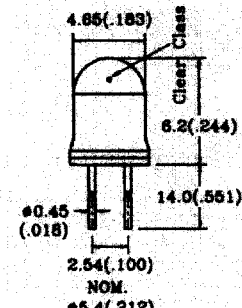
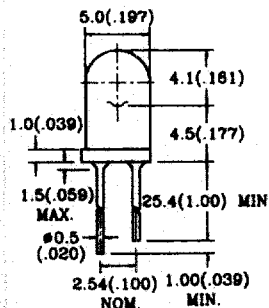
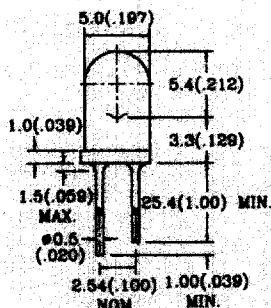
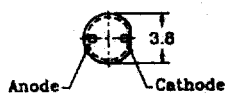
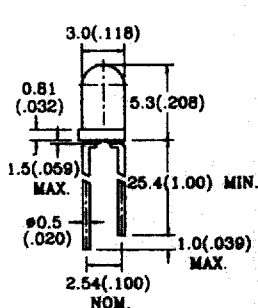
IR-01 BIR-Bx731

IR-02 BIR-Bx734

IR-03 BIR-Bx734-1

IR-04 BIR-FL3E1

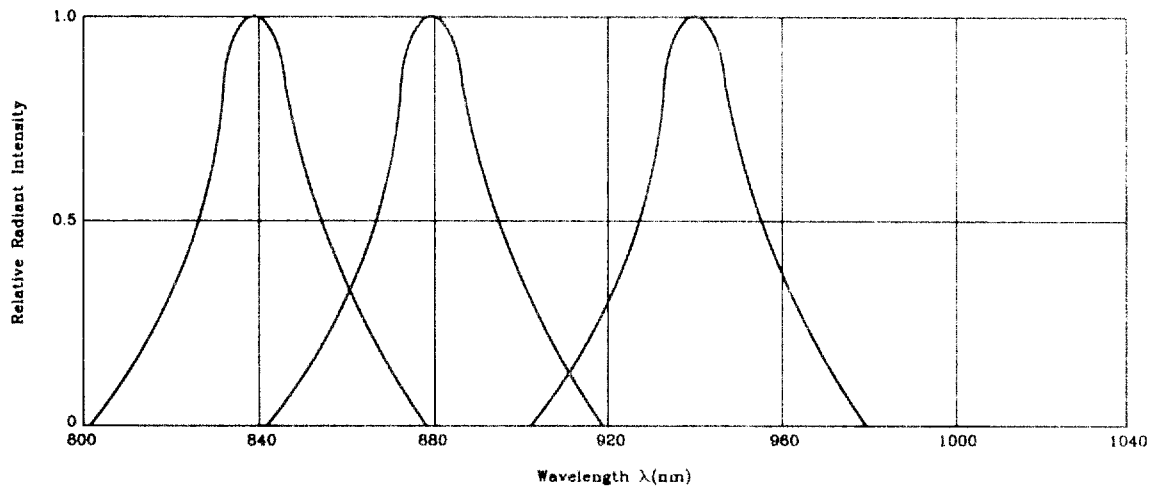
IR-05 BIR-NL3C1



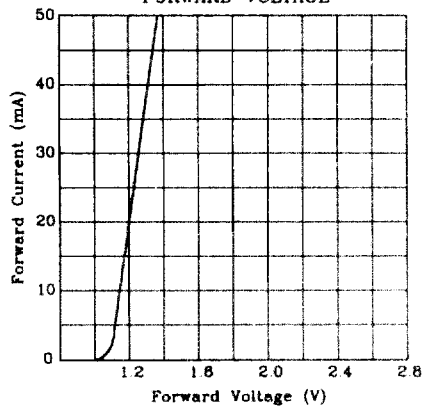
INFRARED EMITTING DIODES

TYPICAL CHARACTERISTICS (INFRARED EMITTING DIODES SERIES)

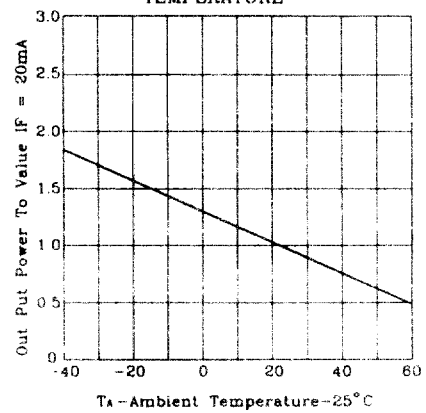
SPECTRAL DISTRIBUTION



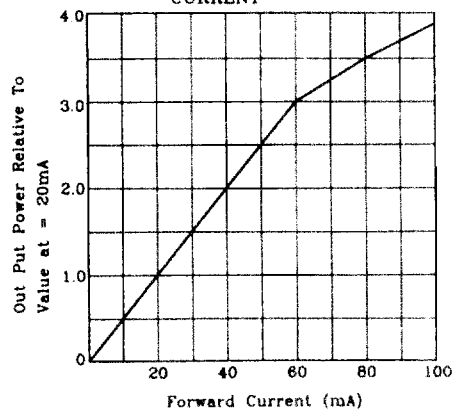
FORWARD CURRENT VS.
FORWARD VOLTAGE



RELATIVE RADIANT
INTENSITY VS. AMBIENT
TEMPERATURE



RELATIVE RADIANT
INTENSITY VS. FORWARD
CURRENT



RADIATION DIAGRAM

