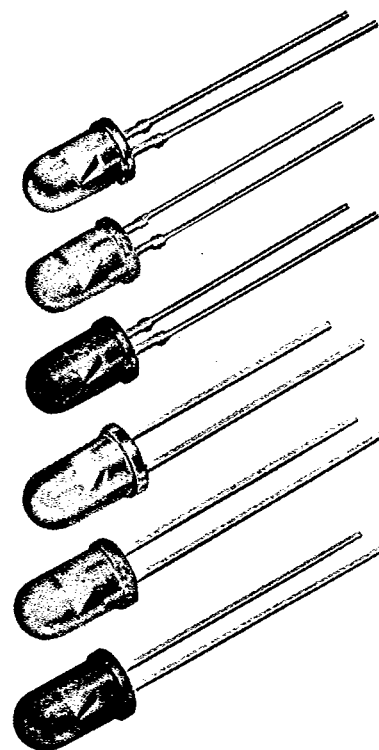
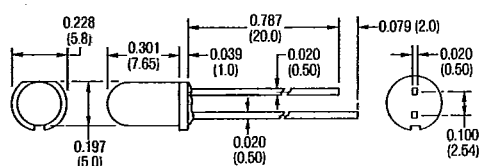


T-1³/₄ LED LAMPS

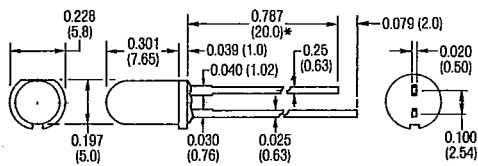
FEATURES	PART NUMBER	MATERIAL	LENS COLOR	VIEWING ANGLE (TYP.)	LUMINOUS INTENSITY (mcd)			ELEC. PARA. (Page 5)
					MIN.	TYP.	@ I _f (mA)	
T-1³/₄ STRAIGHT LEAD TYPES - Excellent on/off contrast ratio. - GaP red excellent at low current levels (Compatible with TTL, MOS and CMOS circuits). - High brightness with wide viewing angle. - Long life, solid state reliability. - Uniform brightness. - Mounting hardware available.	ID5752	GaAsP/GaP	Red/Clear	50°	15.0	25.0	20	C
	ID5753	GaAsP/GaP	Red/Diff.	80°	8.0	14.0	20	C
	ID5059-R	GaP/GaP	Red/Diff.	80°	2.5	3.0	10	A
	ID5549-R	GaP/GaP	Red/Clear	50°	3.5	5.0	10	A
	ID5253	GaP/GaP	Green/Diff.	80°	8.0	16.0	20	E
	ID5252	GaP/GaP	Green/Clear	50°	10.0	35.0	20	E
	ID5353	GaAsP/GaP	Yellow/Diff.	80°	8.0	16.0	20	F
	ID5352	GaAsP/GaP	Yellow/Clear	50°	10.0	35.0	20	F
T-1³/₄ ULTRA-BRIGHT STRAIGHT LEAD TYPES - Ultra-brightness in red, green and yellow. - Excellent for backlighting. - A quantum leap in brightness. - High intensity light emission with wide viewing angles.	ID5531-UR	GaAlAs	Red/Diff.	80°	15.0	50.0	20	B
	ID5501-UR	GaAlAs	Red/Clear	50°	40.0	100.0	20	B
	ID5531-UG	GaP/GaP	Green/Diff.	80°	10.0	30.0	20	E
	ID5501-UG	GaP/GaP	Green/Clear	50°	30.0	60.0	20	E
	ID5531-UY	GaAsP/GaP	Yellow/Diff.	80°	15.0	40.0	20	F
	ID5501-UY	GaAsP/GaP	Yellow/Clear	50°	30.0	60.0	20	F
T-1³/₄ WIRE-WRAPPABLE OFFSET LEAD TYPES - High brightness at low current levels. - Sturdy leads excellent for wire wrapping. - Solid state reliability.	ID5053-R	GaP/GaP	Red/Diff.	80°	0.5	1.5	10	A
	ID554-R	GaP/GaP	Red/Clear	50°	1.5	4.0	10	A
	ID5053-G	GaP/GaP	Green/Diff.	80°	1.0	5.0	10	E
	ID554-G	GaP/GaP	Green/Clear	50°	3.0	17.0	10	E
	ID5053-Y	GaAsP/GaP	Yellow/Diff.	80°	1.0	5.0	10	F
	ID554-Y	GaAsP/GaP	Yellow/Clear	50°	2.0	9.0	10	F



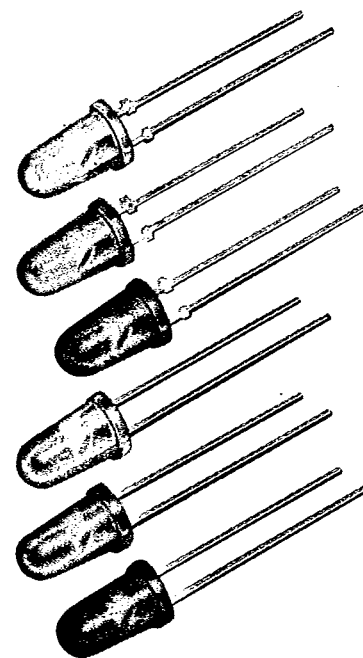
STRAIGHT LEAD TYPES



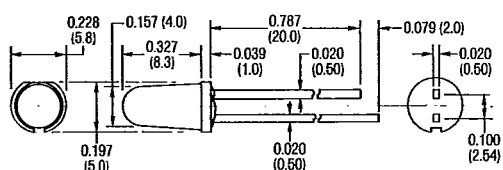
WIRE WRAPPABLE OFFSET LEAD TYPES



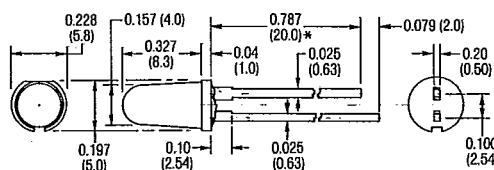
FEATURES	PART NUMBER	MATERIAL	LENS COLOR	VIEWING ANGLE (TYP.)	LUMINOUS INTENSITY (mcd)			ELEC. PARA. (Page 5)
					MIN.	TYP.	@ I _f (mA)	
TAPERED T-1³/₄ ULTRA-BRIGHT STRAIGHT LEAD TYPES - Ultra intensity light emission in red, green and yellow. - Excellent performance under ambient light conditions. - Clear devices provide excellent point source. - Solid state reliability.	ID5269-UR	GaAlAs	Red/Diff.	30°	20	100	20	B
	ID5249-UR	GaAlAs	Red/Clear	10°	50	200	20	B
	ID5269-UG	GaP/GaP	Green/Diff.	30°	20	60	20	E
	ID5249-UG	GaP/GaP	Green/Clear	10°	60	120	20	E
	ID5269-UY	GaAsP/GaP	Yellow/Diff.	30°	20	60	20	F
	ID5249-UY	GaAsP/GaP	Yellow/Clear	10°	60	120	20	F
TAPERED T-1³/₄ WIRE-WRAPPABLE OFFSET LEAD TYPES - Popular T-1³/₄ tapered lens. - Two choices of red for different current levels. - Sturdy wire-wrappable leads. - Solid state reliability.	ID526-R	GaP/GaP	Red/Diff.	30°	1.0	2.5	10	A
	ID5267-R	GaAsP/GaP	Red/Diff.	20°	2.0	5.0	20	C
	ID5247-R	GaAsP/GaP	Red/Clear	20°	4.0	12.0	20	C
	ID526-G	GaP/GaP	Green/Diff.	30°	8.0	30.0	20	E
	ID524-G	GaP/GaP	Green/Clear	20°	20.0	60.0	20	E
	ID526-Y	GaAsP/GaP	Yellow/Diff.	30°	8.0	30.0	20	F
	ID524-Y	GaAsP/GaP	Yellow/Clear	20°	20.0	60.0	20	F

TAPERED T-1³/₄ LED LAMPS

STRAIGHT LEAD TYPES



WIRE WRAPPABLE OFFSET LEAD TYPES

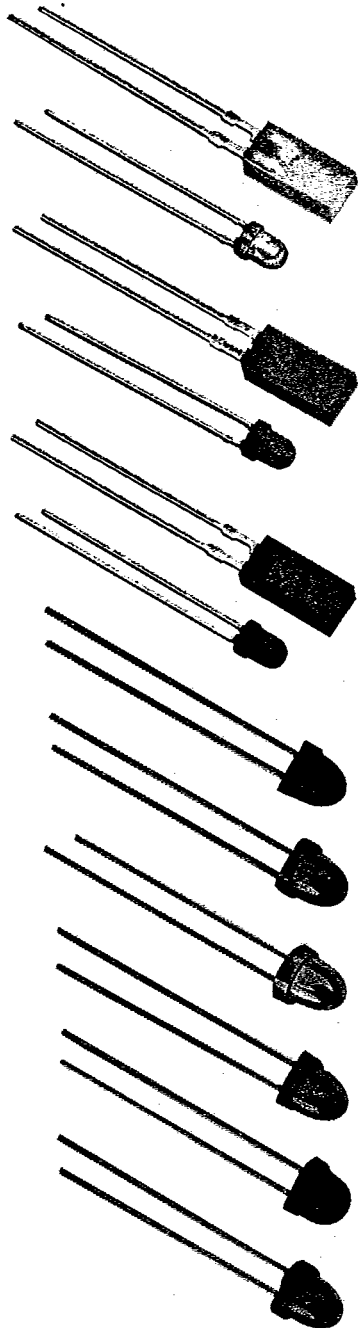


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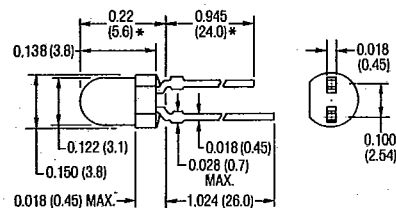
T-41-21

RECTANGULAR LED LAMPS

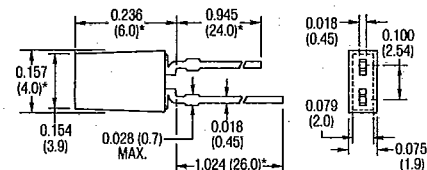


FEATURES	PART NUMBER	MATERIAL	LENS COLOR	VIEWING ANGLE (TYP.)	LUMINOUS INTENSITY (mcd)			ELEC. PARA. (Page 5)
					MIN.	TYP.	@ I _f (mA)	
T-1 SIZE ULTRA-BRIGHT TYPES • Ultra-brightness in T-1 package. • Capable of pulse operation. • Excellent on/off contrast ratio. • Solid state reliability.	ID124-UR	GaAlAs	Red/Diff.	70°	20	40	20	B
	ID124-UG	GaP/GaP	Green/Diff.	70°	10	20	20	E
	ID124-UY	GaAsP/GaP	Yellow/Diff.	70°	10	30	20	F
T-1 SIZE STANDARD TYPES	ID124-R	GaP/GaP	Red/Diff.	75°	1.6	2.0	10	A
	ID124-G	GaP/GaP	Green/Diff.	75°	1.2	3.0	20	E
	ID124-Y	GaAsP/GaP	Yellow/Diff.	75°	1.2	3.0	20	F
RECTANGULAR TYPES • Solid state reliability. • Excellent for use in front panel displays. • Stackable.	ID269-R	GaP/GaP	Red/Diff.	—	0.7	1.5	20	A
	ID369-G	GaP/GaP	Green/Diff.	—	0.5	1.2	20	E
	ID569-Y	GaAsP/GaP	Yellow/Diff.	—	0.5	1.2	20	F
T-1 1/4 LOW PROFILE LED LAMPS	ID50152	GaAsP/GaAs	Red/Clear	45°	7	10	20	D
	ID52152	GaP/GaP	Green/Clear	45°	8	15	20	E
	ID53152	GaAsP/GaP	Yellow/Clear	45°	6	12	10	F
	ID57152	GaAsP/GaP	Orange/Clear	45°	4	8	10	C
	ID50154	GaAsP/GaAs	Red/Diff.	50°	2	3.5	10	D
	ID52154	GaP/GaP	Green/Diff.	50°	8	15	20	E
	ID53154	GaAsP/GaP	Yellow/Diff.	50°	6	12	10	F
	ID57154	GaAsP/GaP	Orange/Diff.	50°	2	4	10	C
	ID56152	GaAsP/GaP	Red/Clear	45°	12	18	10	C
	ID56154	GaAsP/GaP	Red/Diff.	50°	5	7	10	C
T-1 1/4 FLANGELESS LED LAMPS	ID5714	GaAsP/GaAs	Red/Clear	24°	0.6	2.3	10	D
	ID5744	GaAsP/GaP	Red/Clear	24°	1.0	3.5	10	C
	ID5724	GaP/GaP	Green/Clear	24°	1.0	3.5	10	E
	ID5734	GaAsP/GaP	Yellow/Clear	24°	0.7	2.1	10	F
	ID5754	GaAsP/GaP	Orange/Clear	24°	1.0	3.5	10	C
	ID5711	GaAsP/GaAs	Red/Diff.	30°	0.6	1.3	10	D
	ID5741	GaAsP/GaP	Red/Diff.	30°	1.0	2.0	10	C
	ID5721	GaP/GaP	Green/Diff.	30°	1.0	2.0	10	E
	ID5731	GaAsP/GaP	Yellow/Diff.	30°	0.7	1.2	10	F
	ID5751	GaAsP/GaP	Orange/Diff.	30°	1.0	2.0	10	C

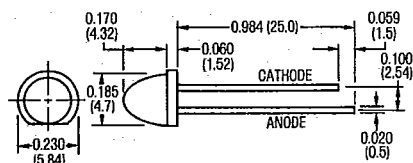
T-1 SIZE TYPES



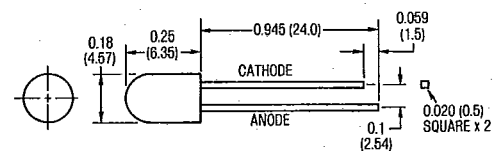
RECTANGULAR TYPES



T-1 1/4 LOW PROFILE LED LAMPS



T-1 1/4 FLANGELESS LED LAMPS

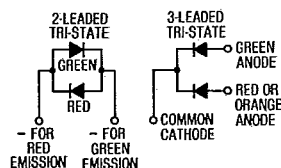


SPECIALTY LED LAMPS

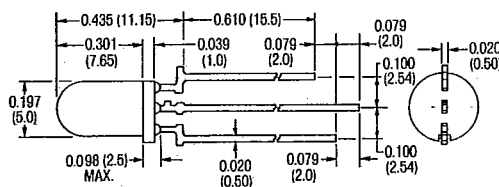
T-41-25

TRI-STATE
T-1 $\frac{3}{4}$ LED LAMPS

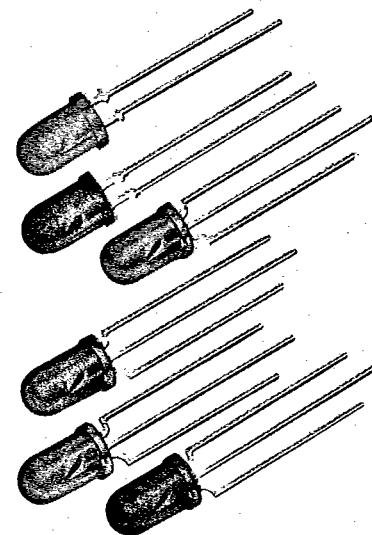
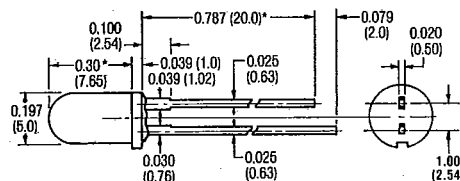
FEATURES	PART NUMBER	MATERIAL	LENS COLOR	VIEWING ANGLE (TYP.)	LUMINOUS INTENSITY (mcd)			ELEC. PARA. (Page 5)
					MIN.	TYP.	@ I _f (mA)	
TRI-STATE T-1¾ LED LAMPS - Available in 3- and 2-leaded packages. - Uniform color brightness at same current levels. - Reduced space requirements. - In 3-leaded package, choice of red and green or orange and green.	3-LEADED RED/GREEN TYPES							
	ID116-RG	GaAsP/GaP	Red/Diff.	80°	3.5	7	15	C
		GaP/GaP	Green/Diff.	80°	2.5	5	15	E
	3-LEADED ORANGE/GREEN TYPES							
	ID116-OG	GaAsP/GaP	Orange/Diff.	80°	2.5	5	15	C
		GaP/GaP	Green/Diff.	80°	2.5	5	15	E
	2-LEADED RED/GREEN TYPES							
	ID5491-RG	GaP/GaP	Red/Diff.	30°	0.6	1.8	20	A
		GaP/GaP	Green/Diff.	30°	1.0	2.0	20	E



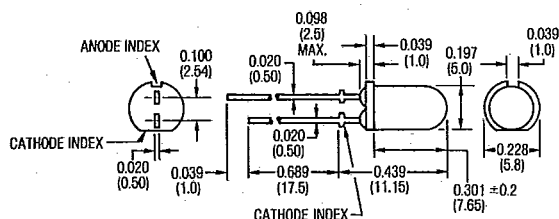
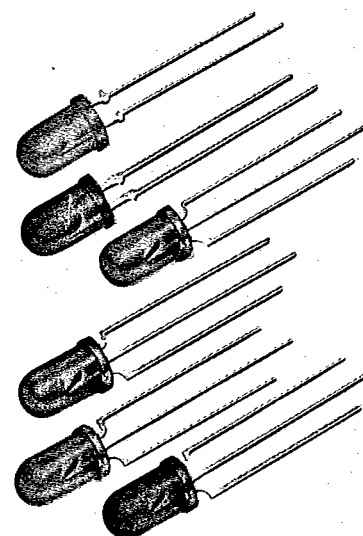
3-LEADED TRI-STATE



2-LEADED TRI-STATE

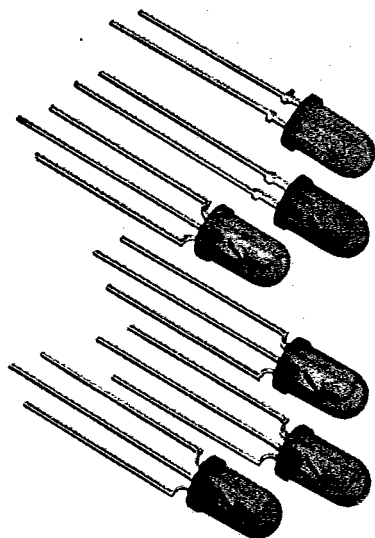


FEATURES	PART NUMBER	MATERIAL	LENS COLOR	VIEWING ANGLE (TYP.)	LUMINOUS INTENSITY (mcd)			ELEC. PARA. (Page 5)
					MIN.	TYP.	@ I _f (mA)	
5VDC INTEGRATED RESISTOR T-1$\frac{3}{4}$ LED LAMPS - Choice of red, green and yellow in popular T-1$\frac{3}{4}$ package. - Available in diffused or clear packages. - Self-contained current limiting resistor. - TTL compatible. - Solid state reliability.	ID4860-5VR	GaP/GaP	Red/Clear	50°	0.8	3.5	5	A
	ID4850-5VR	GaP/GaP	Red/Diff.	80°	0.5	1.5	5	A
	ID4860-5VG	GaP/GaP	Green/Clear	50°	3	17	5	E
	ID4850-5VG	GaP/GaP	Green/Diff.	80°	0.8	5	5	E
	ID4860-5VY	GaAsP/GaP	Yellow/Clear	50°	1	9	5	F
	ID4850-5VY	GaAsP/GaP	Yellow/Diff.	80°	0.8	5	5	F

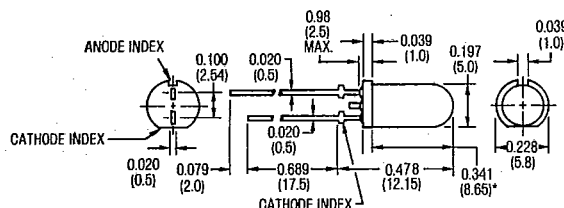
5VDC
INTEGRATED
RESISTOR
T-1 $\frac{3}{4}$ LED LAMPS

SPECIALTY LED LAMPS

2-CHIP T-1³/₄ LED TYPES

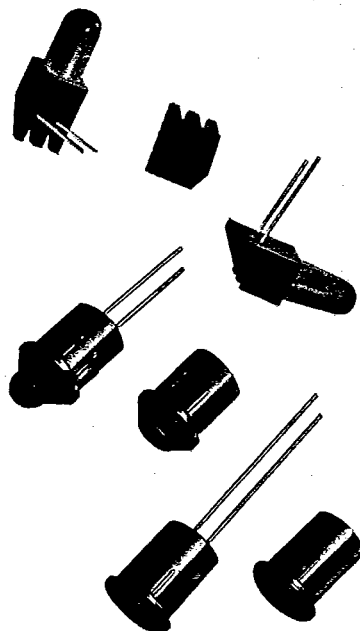


FEATURES	PART NUMBER	MATERIAL	LENS COLOR	VIEWING ANGLE (TYP.)	LUMINOUS INTENSITY (mcd)			ELEC. PARA. (Page 5)
					MIN.	TYP.	@ If (mA)	
2-CHIP T-1³/₄ LED TYPES • 2-chip series connection. • Transparent lensing available in red, orange, yellow and green. • Provides excellent on/off contrast ratio. • Superior to standard LED's for backlighting.	ID255-R	GaAsP/GaP	Red/Clear	50°	3	20	20	C
	ID255-G	GaP/GaP	Green/Clear	50°	3	20	20	E
	ID255-Y	GaAsP/GaP	Yellow/Clear	50°	3	20	20	F
	ID255-O	GaAsP/GaP	Orange/Clear	50°	3	20	20	C



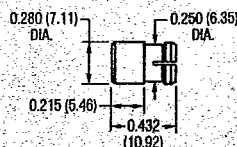
MOUNTING HARDWARE

HARDWARE

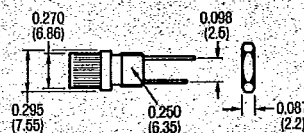


LED MOUNTING HARDWARE

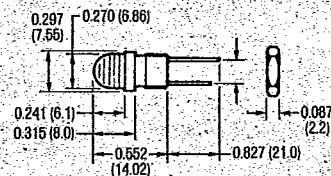
IDM-SR100 MOUNTING



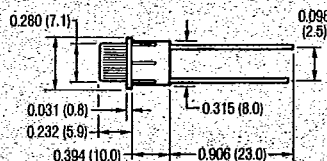
IDM-MF LED MOUNTING



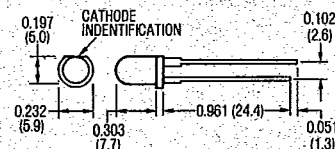
IDM-MD LED MOUNTING



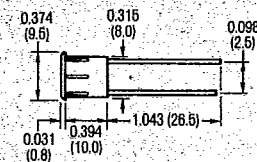
IDM-21F



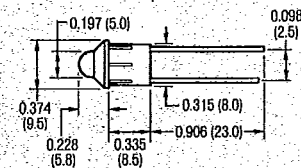
IDM-200 T-1³/₄ MOUNTING RING



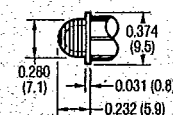
IDM-23 LED MOUNTING HOUSING



IDM-56 LED MOUNTING HOUSING



IDM-21D



LED SELECTOR GUIDE**TABLE A — GaP Material (Red)**

Absolute Maximum Ratings (Ta=25°C)

DESCRIPTION	SYMBOL	RATINGS	UNIT
Forward Current	I_F	20.0	mA
Reverse Voltage	V_R	4.0	V
Power Dissipation	P_D	90.0	mW
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-30 to +100	°C

Electrical and Optical Characteristics (Ta=25°C)

DESCRIPTION	SYMBOL	CONDITION	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 20\text{mA}$	2.1	2.8	V
Reverse Current	I_R	$V_R = 4\text{V}$		5.0	μA
Peak Wavelength	λ_p	$I_F = 15\text{mA}$	700		nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 15\text{mA}$	100		nm

TABLE B — GaAlAs Material (Red)

Absolute Maximum Ratings (Ta = 25°C)

DESCRIPTION	SYMBOL	RATINGS	UNIT
Forward Current	I_F	20	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	55	mW
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-30 to +100	°C

Electrical and Optical Characteristics (Ta = 25°C)

DESCRIPTION	SYMBOL	CONDITION	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 20\text{mA}$	1.75	2.2	V
Reverse Current	I_R	$V_R = 4\text{V}$		100	μA
Peak Wavelength	λ_p	$I_F = 10\text{mA}$	660		nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 10\text{mA}$	25		nm

TABLE C — GaAsP/GaP Material (Red/Orange)

Absolute Maximum Ratings (Ta = 25°C)

DESCRIPTION	SYMBOL	RATINGS	UNIT
Forward Current	I_F	25.0	mA
Reverse Voltage	V_R	4.0	V
Power Dissipation	P_D	70.0	mW
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-30 to +100	°C

Electrical and Optical Characteristics (Ta = 25°C)

DESCRIPTION	SYMBOL	CONDITION	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 20\text{mA}$	2.1	2.8	V
Reverse Current	I_R	$V_R = 4\text{V}$		100	μA
Peak Wavelength	λ_p	$I_F = 20\text{mA}$	635		nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20\text{mA}$	40		nm

TABLE D — GaAsP/GaAs Material (Red)

Absolute Maximum Ratings (Ta = 25°C)

DESCRIPTION	SYMBOL	RATINGS	UNIT
Forward Current	I_F	50	mA
Reverse Voltage	V_R	5.0	V
Power Dissipation	P_D	100	mW
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-30 to +100	°C

Electrical and Optical Characteristics (Ta = 25°C)

DESCRIPTION	SYMBOL	CONDITION	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 20\text{mA}$	1.6	2.0	V
Reverse Current	I_R	$V_R = 5.0\text{V}$		10	μA
Peak Wavelength	λ_p	$I_F = 20\text{mA}$	655		nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20\text{mA}$	40		nm

TABLE E — GaP Material (Green)

Absolute Maximum Ratings (Ta = 25°C)

DESCRIPTION	SYMBOL	RATINGS	UNIT
Forward Current	I_F	25	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	70.0	mW
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-30 to +100	°C

Electrical and Optical Characteristics (Ta = 25°C)

DESCRIPTION	SYMBOL	CONDITION	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 20\text{mA}$	2.1	2.8	V
Reverse Current	I_R	$V_R = 4\text{V}$		5.0	μA
Peak Wavelength	λ_p	$I_F = 15\text{mA}$	565		nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 15\text{mA}$	25		nm

TABLE F — GaAsP Material (Yellow)

Absolute Maximum Ratings (Ta = 25°C)

DESCRIPTION	SYMBOL	RATINGS	UNIT
Forward Current	I_F	25	mA
Reverse Voltage	V_R	4	V
Power Dissipation	P_D	70	mW
Operating Temperature	T_{opr}	-20 to +75	°C
Storage Temperature	T_{stg}	-30 to +100	°C

Electrical and Optical Characteristics (Ta = 25°C)

DESCRIPTION	SYMBOL	CONDITION	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 20\text{mA}$	2.1	2.8	V
Reverse Current	I_R	$V_R = 4\text{V}$		100	μA
Peak Wavelength	λ_p	$I_F = 15\text{mA}$	585		nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 15\text{mA}$	32		nm