



One and Four Element LED Arrays

LTL-5x3-14 Series

LTL-5x3-11 Series

Features

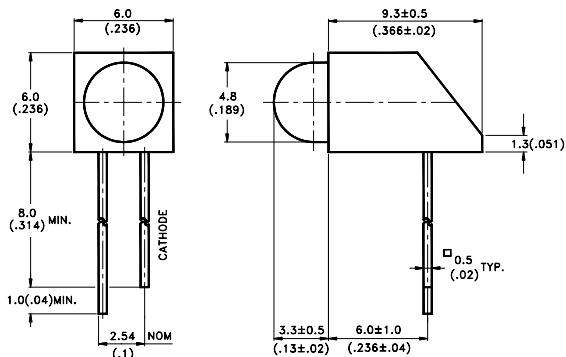
- Designed for ease in circuit board assembly.
- Black case enhances contrast ratio.
- Designed to allow for high density packaging.
- Single package provides 4-line status indications.
- Solid state light source.
- Wide viewing angle.
- High reliability Life measured in years.

Applications

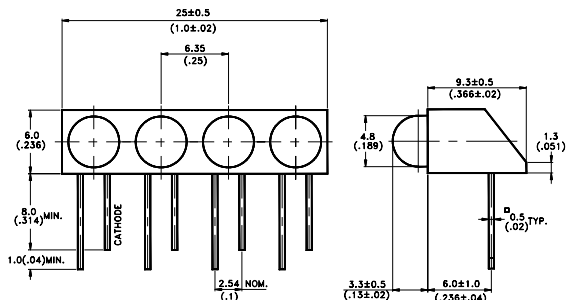
- Circuit board indicator.
- Panel illumination.
- Logic status indicator.
- Binary data display Permits stacking so that multiple functions can be displayed.
- Position indicator.

Package Dimensions

LTL-5x3-11 Series



LTL-5x3-14 Series



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ (.010") unless otherwise noted.
3. The holder color is black only.

Devices

Part No. LTL-	Lens	Source Color
503-11 503-14	Red Diffused	Red
533-11 533-14	Green Diffused	Green
553-11 553-14	Yellow Diffused	Yellow

Absolute Maximum Ratings at Ta=25°C

Parameter	LTL-503-11 503-14	LTL-533-11 533-14	LTL-553-11 553-14	Unit
Power Dissipation	80	100	60	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	200	120	80	mA
Continuous Forward Current	40	30	20	mA
Derating Linear From 50°C	0.5	0.4	0.25	mA/°C
Reverse Voltage	5	5	5	V
Operating Temperature Range	-55°C to +100°C			
Storage Temperature Range	-55°C to +100°C			
Lead Soldering Temperature [1.6mm (.063 in.) from body]	260°C for 5 Seconds			

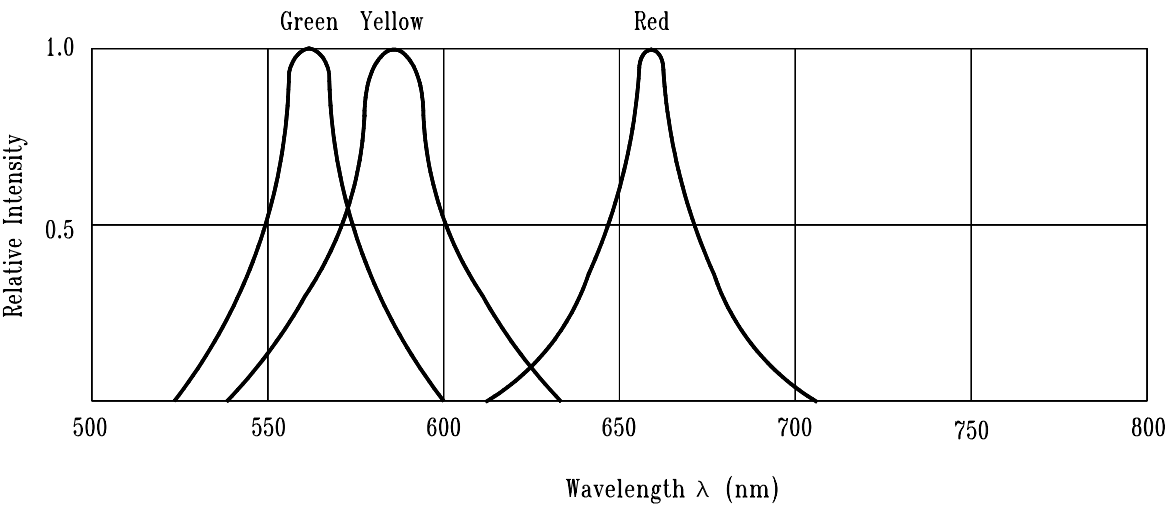


Fig.1 Relative Intensity vs. Wavelength

Electrical/Optical Characteristics at Ta=25°C

Parameter	Symbol	Part No. LTL-	Min.	Typ.	Max.	Unit.	Test Condition.
Luminous Intensity	I _v	503-11/-14 533-11/-14 553-11/-14	0.4 12.6 3.7	1.1 40 12.6		mcd	I _F =10 mA Note 1,4
Viewing Angle	2 θ $\frac{1}{2}$	503-11/-14 533-11/-14 553-11/-14		60		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λ P	503-11/-14 533-11/-14 553-11/-14		655 565 585		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λ d	503-11/-14 533-11/-14 553-11/-14		651 569 588		nm	Note 3
Spectral Line Half Width	$\Delta \lambda$	503-11/-14 533-11/-14 553-11/-14		24 30 35		nm	
Forward Voltage	V _F	503-11/-14 533-11/-14 553-11/-14		1.7 2.1 2.1	2.0 2.6 2.6	V	I _F =20mA
Reverse Current	I _R	503-11/-14 533-11/-14 553-11/-14			100	μ A	V _R =5V
Capacitance	C	503-11/-14 533-11/-14 553-11/-14		30 35 15		pF	V _F =0 , f=1MHz

Notes:1.Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eyeresponse curve.

2. $\theta \frac{1}{2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3.The dominant wavelength, λ d is derived from the CIE chromaticity diagram and represents the single wavelength which defines the color of the device.

4. I_v need $\pm$ 15% additionalary for guaranteed limits.

Typical Electrical/Optical Characteristic Curves (25°C Ambient Temperature Unless Otherwise Noted)

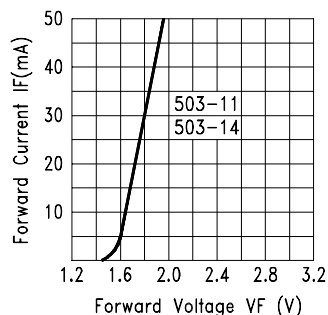


Fig.18 FORWARD CURRENT VS. FORWARD VOLTAGE

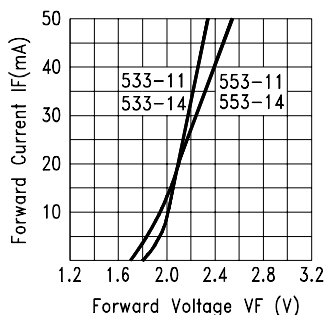


Fig.19 FORWARD CURRENT VS. FORWARD VOLTAGE

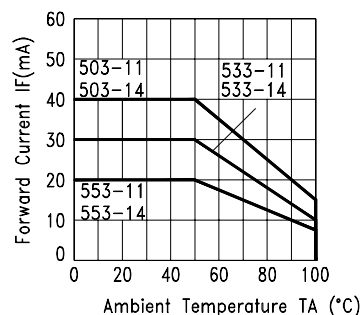


Fig.20 FORWARD CURRENT DERATING CURVE

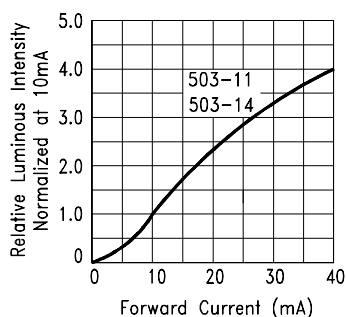


Fig.21 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

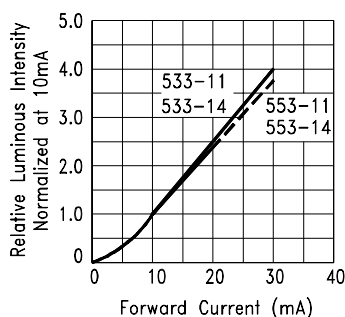


Fig.22 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

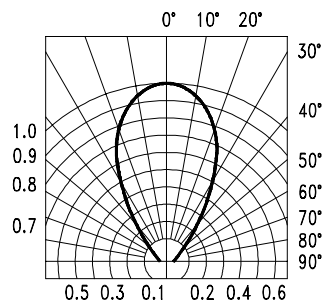


Fig.23 SPATIAL DISTRIBUTION

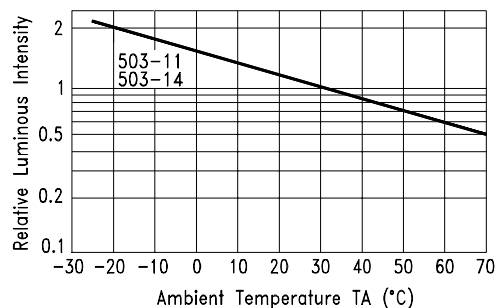


Fig.24 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

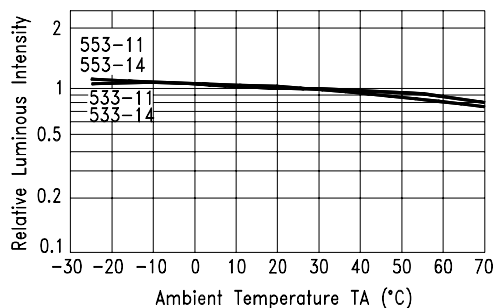


Fig.25 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE