



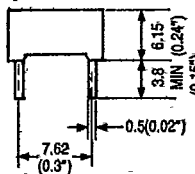
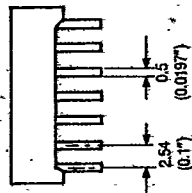
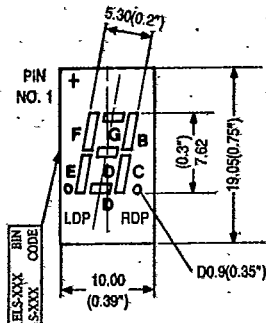
ELS-313/312 SERIES

Single Digit LED Display(0.3 inch)

MAIN FEATURES:

- * 0.3 INCH HIGH CHARACTER.
- * CHOICES OF RIGHT/LEFT DECIMAL POINT.
- * EXCELLENT CHARACTER APPEARANCE.
- * I.C. COMPATIBLE.
- * CATEGORIZED FOR LUMINOUS INTENSITY.
- * LOW POWER CONSUMPTION.

Package Dimensions:



ELS-313 COMMON CATHODE

Pin Assignment

- 1 COMMON CATHODE
- 2 ANODE F
- 3 ANODE G
- 4 ANODE E
- 5 ANODE D
- 6 COMMON CATHODE
- 7 ANODE RDP
- 8 CATHODE C
- 9 ANODE B
- 10 ANODE A

ELS-312 COMMON ANODE

Pin Assignment

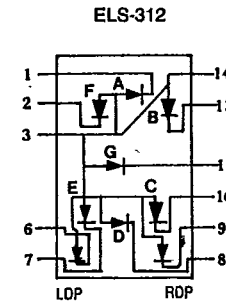
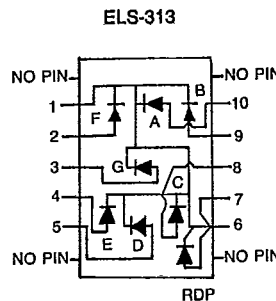
- 1 CATHODE A
- 2 CATHODE F
- 3 COMMON ANODE
- 4 NO PIN
- 5 NO PIN
- 6 CATHODE LDP
- 7 CATHODE E
- 8 CATHODE D
- 9 CATHODE RDP
- 10 CATHODE C
- 11 CATHODE G
- 12 NO PIN
- 13 CATHODE B
- 14 COMMON ANODE

NOTE: All dimensions are in $\frac{\text{Inches}}{\text{millimeters}}$, tolerance is $\frac{0.010}{0.25\text{mm}}$ unless otherwise noted.

DESCRIPTION:

The S301/S322 series are 7.62mm high LED displays designed for viewing distances of up to three meters. S301 types get right DP while S322 types have right DP and left DP. Both are most suitable for use in instruments, point of sale terminals, clocks and appliances. Red ones are with red segments while bright red ones are with white segments and black surface; green ones with white segments and grey surface; hi-efficiency red ones with red segments and red surface; orange ones with white segments and grey surface.

INTERNAL CIRCUIT DIAGRAM



ABSOLUTE MAXIMUM RATINGS: (Ta = 25°C)

Reverse Voltage	: 5 Volt
Reverse Current (Vr = 5V)	: 10μA
Operating Temperature Range	: -40°C To 85°C
Storage Temperature Range	: -40°C To 100°C
Lead Soldering Temperature	: 260°C For 5 Seconds
[1.6 mm (0.063inch) From Body]	

Parameter Description	Symbol	Unit
Spectral Line Half-Width	$\Delta\lambda$	nm
Power Dissipation	Pd	mW
Peak Forward Current (Duty 1/10, @ 1 KHz)	If (Peak)	mA
Recommended Operating Current	If (Rec)	mA
Average Luminous Intensity *1.2 (If = 10mA)	Iv	μcd
Luminous Intensity Matching Ratio	Iv-m	
Forward Voltage (If = 20mA)	Vf	V

PART SELECTION AND APPLICATION INFORMATION (RATINGS AT 25°C AMBIENT)

New Model No.	Old Model No.	Chip		C.C. or C.A.	Peak Wave Length λP (nm)	Absolute Maximum Ratings				Electro-Optical Characteristics						Iv-m	Remark
		Material	Emitted Color			Δλ	Pd	If	If (Peak)	Vf (V)			If (Rec)	Iv (μcd)			
										Min.	Typ.	Max.		Min.	Typ.		
ELS-313AR	S301RWB	GaAsP	Red	Common Cathode	655	40	110	40	200	1.5	1.7	2.0	10~20	200	450	2:1	*
ELS-313AP	S301HWB	GaP	Bright Red		697	90	45	15	50	1.7	2.1	2.8	5~10	300	600	2:1	*
ELS-313AHR	S301IDR	GaAsP/GaP	Hi-Eff Red		635	45	100	30	160	1.7	2.0	2.8	10~20	750	1800	2:1	
ELS-313AG	S301GWA	GaP	Green		565	30	100	30	160	1.7	2.1	2.8	10~20	750	1800	2:1	*
ELS-313AE	S301EWA	GaAsP/GaP	Orange		635	45	100	30	160	1.7	2.0	2.8	10~20	750	1800	2:1	
ELS-312AR	S322RDB	GaAsP	Red	Common Anode	655	40	110	40	200	1.5	1.7	2.0	10~20	200	450	2:1	**
ELS-312AP	S322HWP	GaP	Bright Red		697	90	45	15	50	1.7	2.1	2.8	5~10	300	600	2:1	
ELS-312AHR	S322IDR	GaAsP/GaP	Hi-Eff Red		635	45	100	30	160	1.7	2.0	2.8	10~20	750	1800	2:1	
ELS-312AG	S322GWA	GaP	Green		565	30	100	30	160	1.7	2.1	2.8	10~20	750	1800	2:1	
ELS-312AE	S322EWA	GaAsP/GaP	Orange		635	45	100	30	160	1.7	2.0	2.8	10~20	750	1800	2:1	