



EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DDS-402-007 REV: 1.1

0.4" Single Digit Displays

MODEL NO : ELS-402IDR/S23 ECN : Page: 1/5

■ Features :

- Industrial standard size.
- Low power consumption.
- Categorized for luminous intensity.

■ Applications:

- Audio equipment
- Instrument panels
- Digital read out display

■ Descriptions :

- The ELS-402 series is a large 10.16mm
(0.4")high seven segment display
design for viewing distances up to
7 meters.
- These displays provide excellent
reliability in bright ambient light.
- These device is made with red
segments and red surface.

PART NO	CHIP		C.C. or C.A.
	Material	Emitted Color	
ELS-402IDR/S23	GaAsP/GaP	Hi-Eff Red	C.A.

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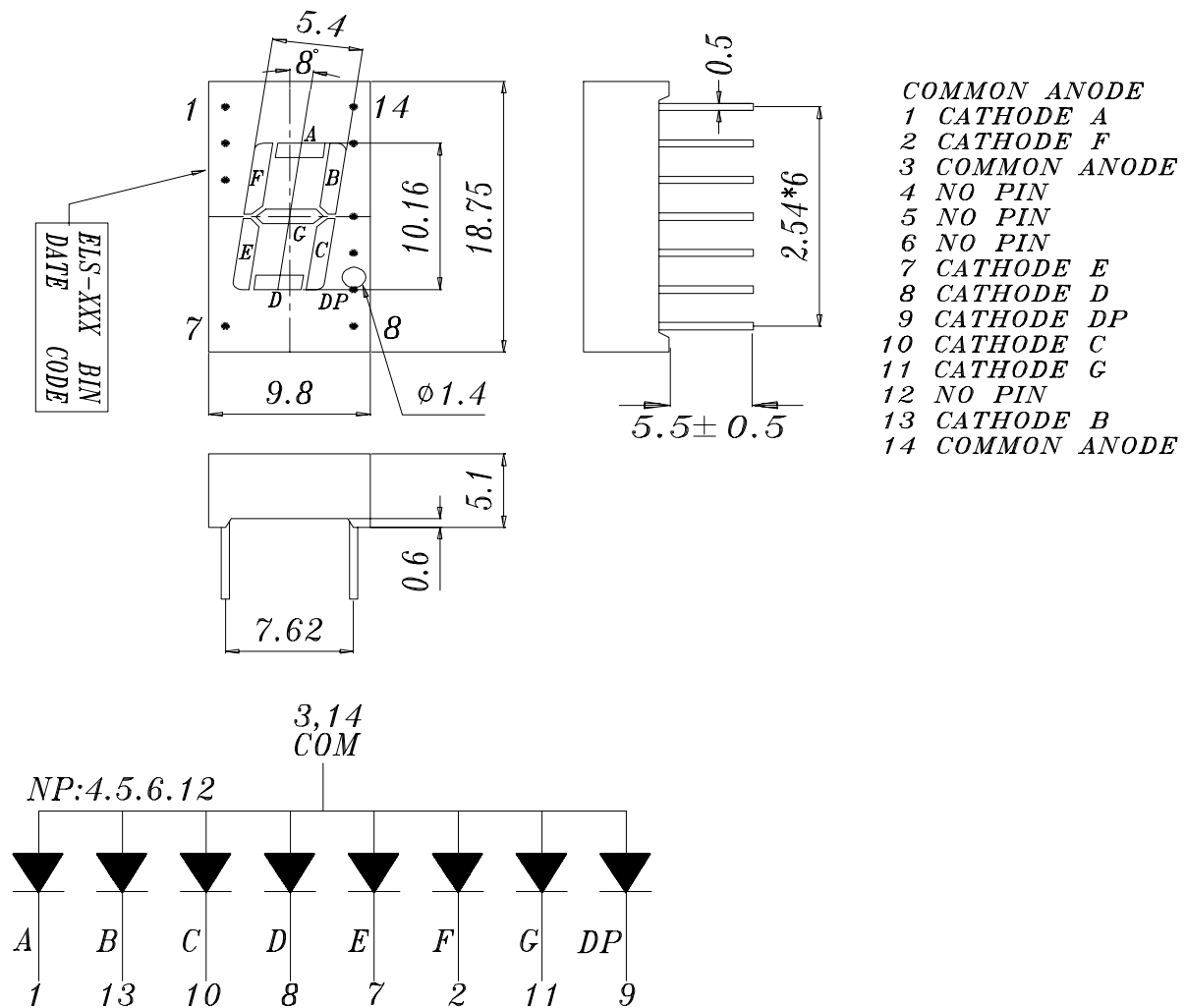
<http://www.everlight.com>



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■ Package Dimensions:



■ NOTES:

1. All dimensions are in millimeters, tolerance is 0.25mm unless otherwise noted.
 2. Above specification may be changed without notice.
- Supplier will reserve authority on material change for above specification.



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■ Absolute maximum ratings at Ta = 25°C :

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _r	5	V
Forward Current	I _f	30	mA
Operating Temperature	T _{opr}	-40 to +85	°C
Storage Temperature	T _{stg}	-40 to +100	°C
Soldering Temperature	T _{sol}	260 ± 5	°C
Power Dissipation	P _d	100	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	I _f (Peak)	160	mA

■ Electronic optical characteristics :

Parameter		Symbol	MIN.	TYP.	MAX.	Unit	Condition
Luminous Intensity	Per segment	I _v	2.00	----	6.40	mcd	I _f =10mA
	Per decimal point		0.60	1.00	----		
Peak Wavelength		λ _p	----	635	----	nm	I _f =20mA
Dominant Wavelength		λ _d	----	625	----	nm	I _f =20mA
Spectrum Radiation Bandwidth		△λ	----	45	----	nm	I _f =20mA
Forward Voltage		V _f	1.7	2.0	2.4	V	I _f =20mA
Reverse Current		I _r	----	----	10	μA	V _r =5V



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Reliability test item and condition:

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	0/1
2	Temperature Cycle	H : +85°C 30min ∫ 5 min L : -55°C 30min	50 CYCLE	76 PCS	0/1
3	Thermal Shock	H : +100°C 5min ∫ 10 sec L : -10°C 5min	50 CYCLE	76 PCS	0/1
4	High Temperature Storage	TEMP : 100°C	1000 HRS	76 PCS	0/1
5	Low Temperature Storage	TEMP : -55°C	1000 HRS	76 PCS	0/1
6	DC Operating Life	If = 10 mA	1000 HRS	76 PCS	0/1
7	High Temperature / High Humidity	85°C/85% RH	1000 HRS	76 PCS	0/1

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■ Typical Electro-Optical Characteristic Curves:

