



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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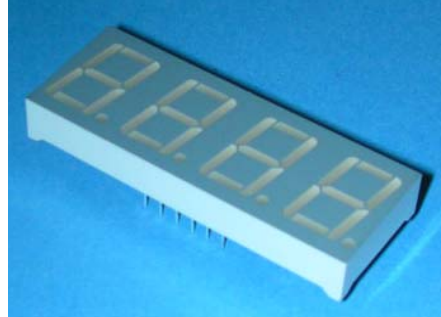


Technical Data Sheet
0.56" Quadruple Digit Display

F511UBWA/C470

■ Features :

- Industrial standard size.
- Low power consumption.
- Categorized for luminous intensity.
- Pb free
- The product itself will remain within RoHS compliant version



■ Descriptions :

- The ELF-511 series is a large 14.22 mm (0.56")high seven segment display designed for viewing distances up to 7 meters.
- These displays provide excellent reliability in bright ambient light.
- These devices are made with white segments and gray surface.

■ Applications :

- Audio equipment
- Instrument panels
- Digital read out display

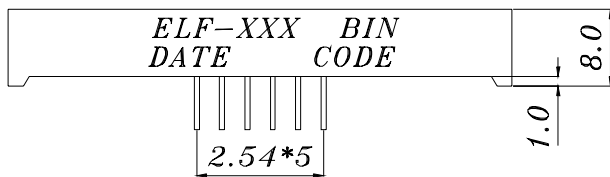
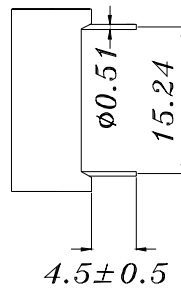
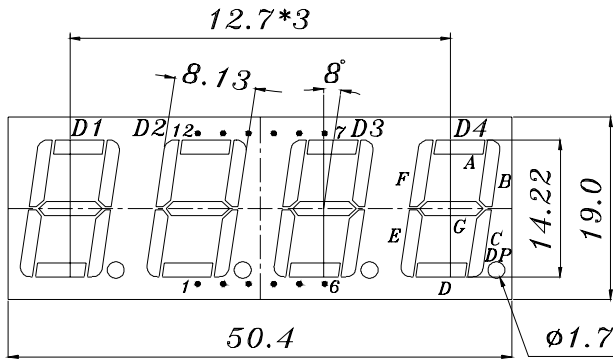
PART NO.	Chip	
	Material	Emitted Color
F511UBWA/C470	InGaN/SiC	Blue

BG0412007 50007984

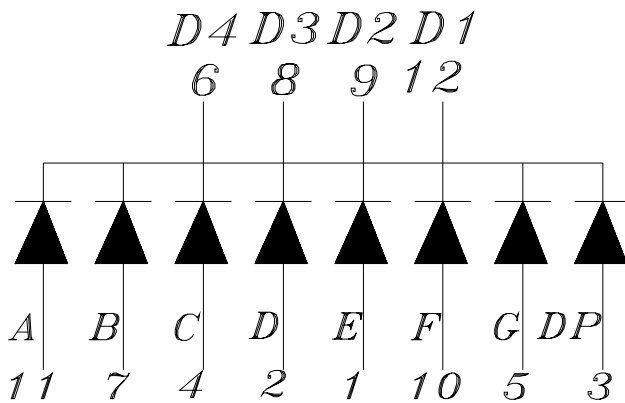
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Package Dimensions



- COMMON CATHODE*
- 1 ANODE E
 - 2 ANODE D
 - 3 ANODE DP
 - 4 ANODE C
 - 5 ANODE G
 - 6 COMMON CATHODE D4
 - 7 ANODE B
 - 8 COMMON CATHODE D3
 - 9 COMMON CATHODE D2
 - 10 ANODE F
 - 11 ANODE A
 - 12 COMMON CATHODE D1



- 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.



LIGHTING FOREVER

Technical Data Sheet
0.56" Quadruple Digit Display

F511UBWA/C470

■ Absolute maximum ratings at Ta = 25°C :

Parameter	Symbol	Rating	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	30	mA
Operating Temperature	Topr	-40 to +85	°C
Storage Temperature	Tstg	-40 to +100	°C
Soldering Temperature *	Tsol	260	°C
Electrostatic Discharge	ESD	1000	V
Power Dissipation	Pd	130	mW

Note: *Soldering time ≤ 5 seconds.

■ Electronic optical characteristics :

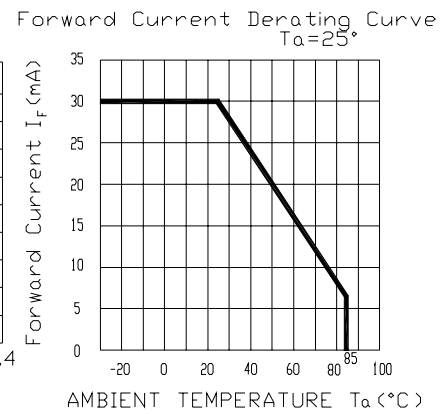
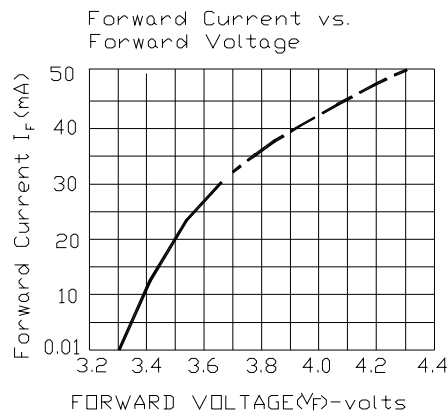
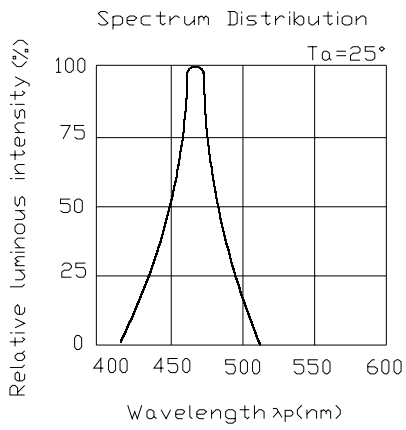
Parameter		Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Per segment	Iv	----	1.4	----	mcd	IF=2mA
			4.0	6.4	----	mcd	IF=10mA
	Per decimal point		----	0.4	----	mcd	IF=2mA
			1.0	1.4	----	mcd	IF=10mA
Peak Wavelength		λ p	----	468	----	nm	IF=20mA
Dominant Wavelength		λ d	----	470	----	nm	IF=20mA
Spectrum Radiation Bandwidth		△ λ	----	26	----	nm	IF=20mA
Forward Voltage		VF	-----	3.5	4.3	V	IF=20mA
Reverse Current		IR	----	----	100	μ A	VR=5V



F511UBWA/C470

■ Typical Electro-Optical Characteristic Curves:

(UB)



F511UBWA/C470

■ Reliability test items and conditions:

The reliability of products shall be satisfied with items listed below.

Confidence level : 97%

LTPD : 3%

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Failure Judgment Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 SEC	76 PCS	$I_v \leq I_{vt} * 0.5$ or $V_f \geq U$ or $V_f \leq L$	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

Note : I_{vt} : The test I_v value of the chip before the reliability test

I_v : The test value of the chip that has completed the reliability test

U : Upper Specification Limit

L : Lower Specification Limit



LIGHTING FOREVER

Technical Data Sheet

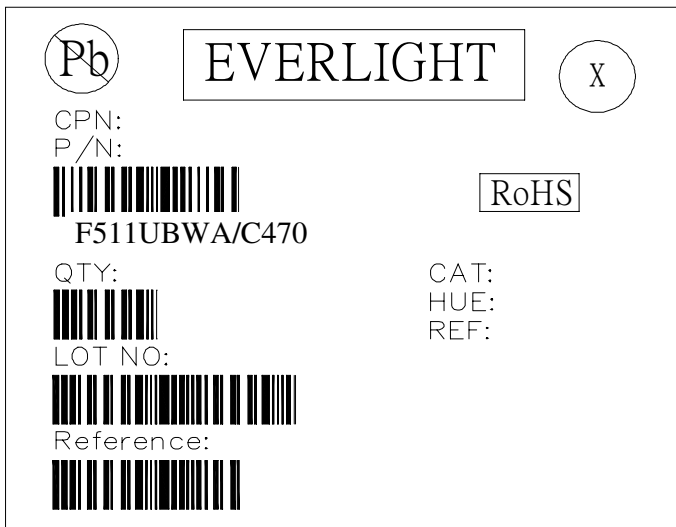
0.56" Quadruple Digit Display

F511UBWA/C470

■ Packing Quantity Specification

- 1. 10PCS/tube, 54 tubes/box
- 2. 4Boxes/Carton

Label Form Specification



CPN: Customer's Production Number
 P/N : Production Number
 QTY: Packing Quantity
 CAT: Ranks
 HUE: Dominant Wavelength
 REF: Reference
 LOT No: Lot Number
 Reference: Volume label code

Notes :

- 1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
- 2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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