



LIGITEK

LIGITEK ELECTRONICS CO.,LTD.
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DUAL DIGIT LED DISPLAY (0.4 Inch)

LDD495/64-10/SRPX-X

DATA SHEET

DOC. NO : QW0905-LDD495/64-10/SRPX-X

REV. : A

DATE : 24 - May - 2005



Detailed

- 1. LDD495/64-10/SRP9-3
- 2. LDD495/64-10/SRP12-6
- 3. LDD495/64-10/SRP15-9
- 4. LDD495/64-10/SRP18-12
- 5. LDD495/64-10/SRP21-15
- 6. LDD495/64-10/SRP24-18

L D D 4 9 5 / 6 4 - 1 0 / S R P X - X
 A B C D E F G H I J K L

- A: Ligitek
- B: Number Of Digital
- C: Display
- D: Digit Height Of Characters
- E: Modification
- F: Polarization
- G: Emitted Color & Material
- H: Black Color
- I: Original Color
- J: Space
- K: Pin length count from the ref edge.
- L: Space heigth

For Example

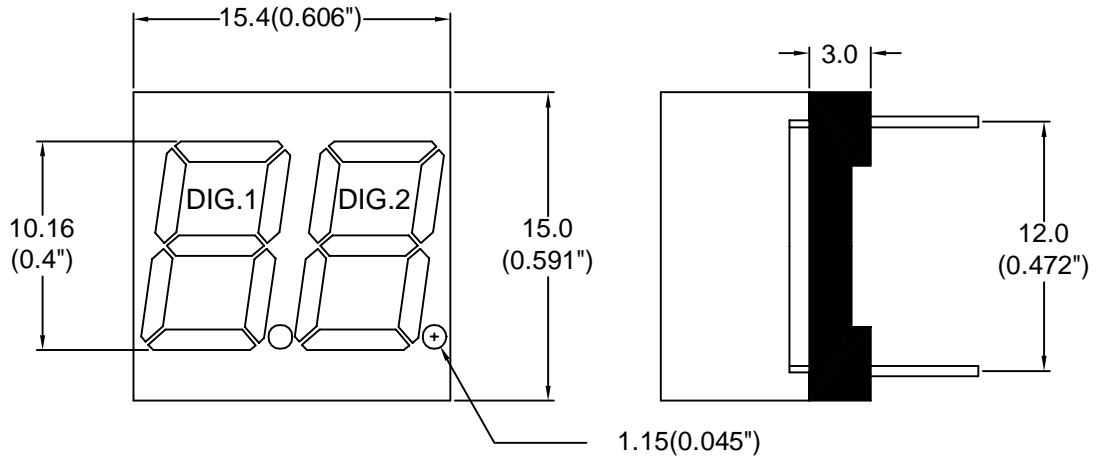
LDD495/64-10/SRP9-3

SRP9: Pin length count from the ref edge is 9.0mm.

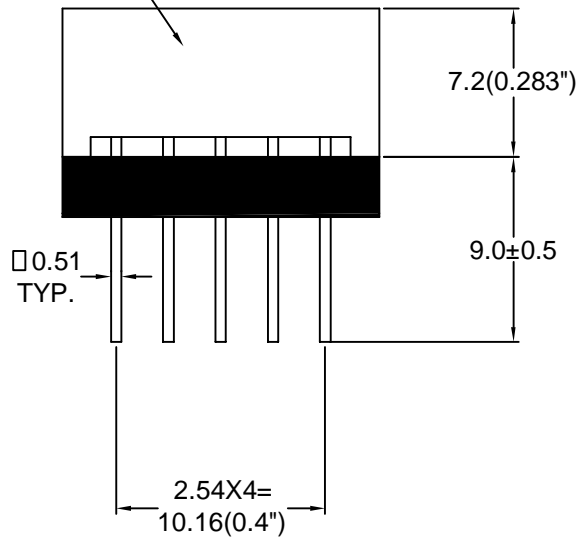
-3: Space heigth



Package Dimensions



LDD495/64-10/SRP9-3
LIGITEK



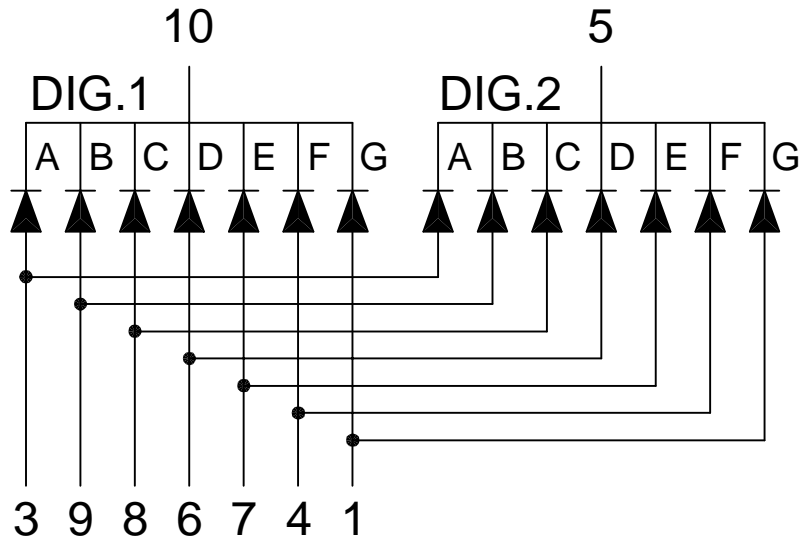
PIN NO.1 →

Note : 1.All dimension are in millimeters and (Inch) tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.
2.Specifications are subject to change without notice.

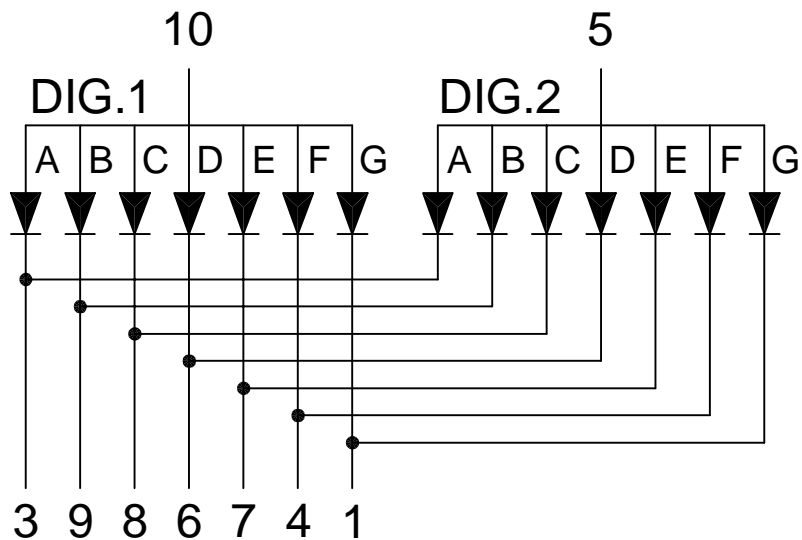


Internal Circuit Diagram

LDD4954-10/SRPX-X



LDD4964-10/SRPX-X





Electrical Connection

PIN NO.	LDD4954-10/SRPX-X	PIN NO.	LDD4964-10/SRPX-X
1	Anode G	1	Cathode G
2	No Pin	2	No Pin
3	Anode A	3	Cathode A
4	Anode F	4	Cathode F
5	Common Cathode Dig.2	5	Common Anode Dig.2
6	Anode D	6	Cathode D
7	Anode E	7	Cathode E
8	Anode C	8	Cathode C
9	Anode B	9	Cathode B
10	Common Cathode Dig.1	10	Common Anode Dig.1

Absolute Maximum Ratings at Ta=25

Parameter	Symbol	Ratings	UNIT
		E	
Forward Current Per Chip	IF	30	mA
Peak Forward Current Per Chip (Duty 1/10,0.1ms Pulse Width)	IFP	120	mA
Power Dissipation Per Chip	PD	100	mW
Reverse Current Per Any Chip	Ir	10	μA
Operating Temperature	Topr	-25 ~ +85	
Storage Temperature	Tstg	-25 ~ +85	
Solder Temperature 1-16 Inch Below Seating Plane For 3 Seconds At 260			

Part Selection And Application Information(Ratings at 25)

PART NO	CHIP		common cathode or anode	P (nm)	(nm)	Electrical					IV-M
	Material	Emitted				Vf(v)			Iv(mcd)		
						Min.	Typ.	Max.	Min.	Typ.	
LDD4954-10/SRPX-X	GaAsP/GaP	Orange	Common Anode	635	45	1.7	2.1	2.6	1.35	2.35	2:1
LDD4964-10/SRPX-X			Common Cathode								

Note : 1.The forward voltage data did not including $\pm 0.1V$ testing tolerance.
2. The luminous intensity data did not including $\pm 15\%$ testing tolerance.



Test Condition For Each Parameter

Parameter	Symbol	Unit	Test Condition
Forward Voltage Per Chip	Vf	volt	If=20mA
Luminous Intensity Per Chip	Iv	mcd	If=10mA
Peak Emission Wavelength	P	nm	If=20mA
Spectral Line Half-Width		nm	If=20mA
Reverse Current Any Chip	Ir	μ A	Vr=5V
Luminous Intensity Matching Ratio	IV-M		



Typical Electro-Optical Characteristics Curve

E CHIP

Fig.1 Forward current vs. Forward Voltage

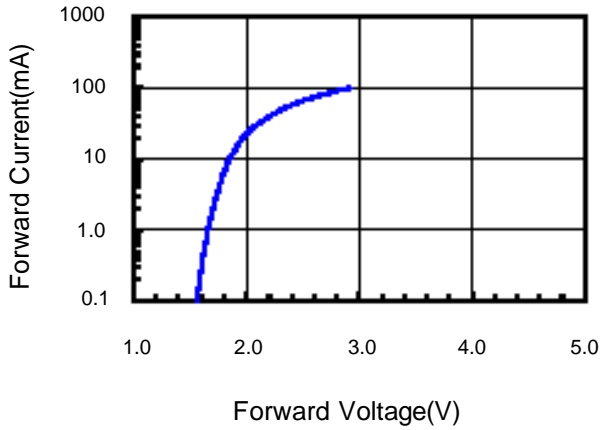


Fig.2 Relative Intensity vs. Forward Current

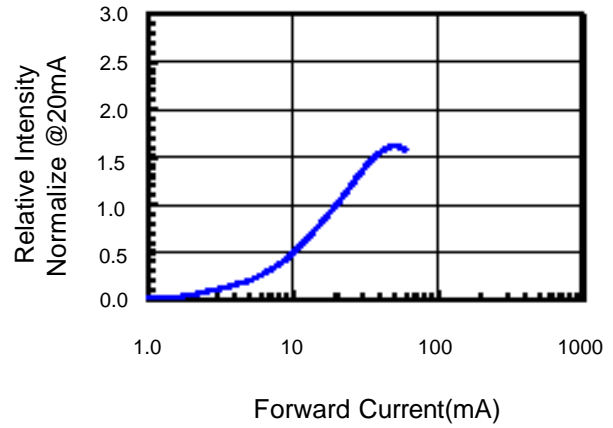


Fig.3 Forward Voltage vs. Temperature

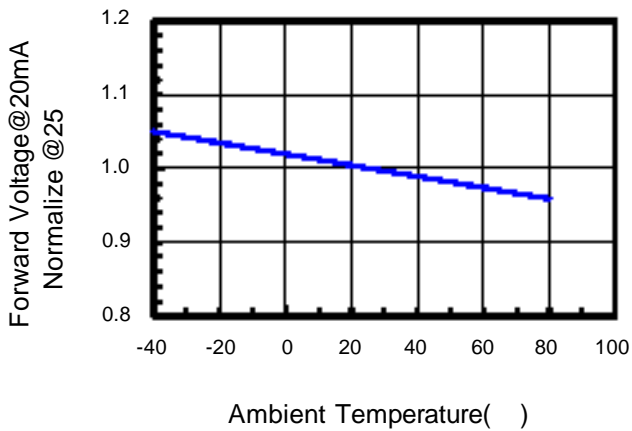


Fig.4 Relative Intensity vs. Temperature

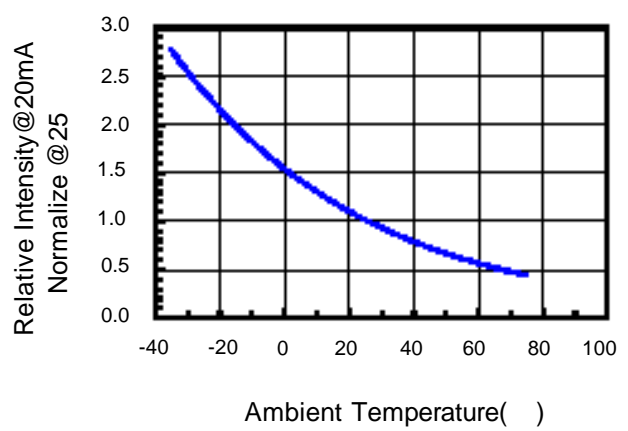
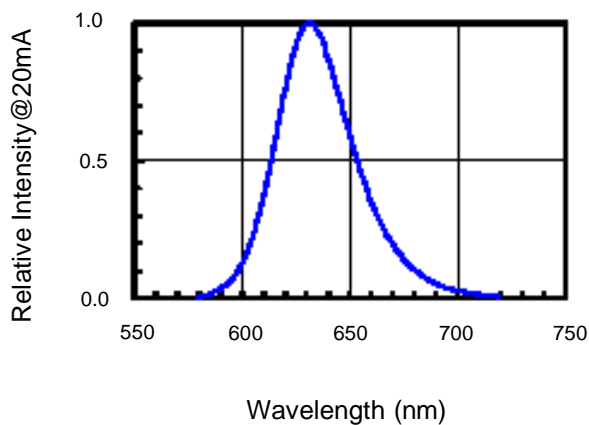


Fig.5 Relative Intensity vs. Wavelength





Reliability Test:

Test Item	Test Condition	Description	Reference Standard
Operating Life Test	1.Under Room Temperature 2.If=10mA 3.t=1000 hrs (-24hrs, +72hrs)	This test is conducted for the purpose of determining the resistance of a part in electrical and thermal stressed.	MIL-STD-750: 1026 MIL-STD-883: 1005 JIS C 7021: B-1
High Temperature Storage Test	1.Ta=105 ±5 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of high temperature for hours.	MIL-STD-883:1008 JIS C 7021: B-10
Low Temperature Storage Test	1.Ta=-40 ±5 2.t=1000 hrs (-24hrs, +72hrs)	The purpose of this is the resistance of the device which is laid under condition of low temperature for hours.	JIS C 7021: B-12
High Temperature High Humidity Test	1.Ta=65 ±5 2.RH=90%~95% 3.t=240hrs ±2hrs	The purpose of this test is the resistance of the device under tropical for hours.	MIL-STD-202:103B JIS C 7021: B-11
Thermal Shock Test	1.Ta=105 ±5 & -40 ±5 (10min) (10min) 2.total 10 cycles	The purpose of this is the resistance of the device to sudden extreme changes in high and low temperature.	MIL-STD-202: 107D MIL-STD-750: 1051 MIL-STD-883: 1011
Solder Resistance Test	1.T.Sol=260 ±5 2.Dwell time= 10 ±1sec.	This test intended to determine the thermal characteristic resistance of the device to sudden exposures at extreme changes in temperature when soldering the lead wire.	MIL-STD-202: 210A MIL-STD-750: 2031 JIS C 7021: A-1
Solderability Test	1.T.Sol=230 ±5 2.Dwell time=5 ±1sec	This test intended to see soldering well performed or not.	MIL-STD-202: 208D MIL-STD-750: 2026 MIL-STD-883: 2003 JIS C 7021: A-2