

**DISPLAY Elektronik GmbH**

**DATA SHEET**

**BACKLIGHT**

**DE LP-501-RGB**

*Product Specification*

*Version: 3*

**02.04.2025**

# GENERAL SPECIFICATION

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MODEL NO. :

# DE LP-501-RGB

CUSTOMER P/N

Version No.	Change Description	Date
0	Original Version	25.08.2016
1	Add LED Lifetime	29.08.2016
2	Update the Electrical/Optical Specification	22.10.2024
3	Update the table of electrical/optical specification	02.04.2025

PREPARED BY: WH

DATE: 22.10.2024

APPROVED BY: MH

DATE: 22.10.2024

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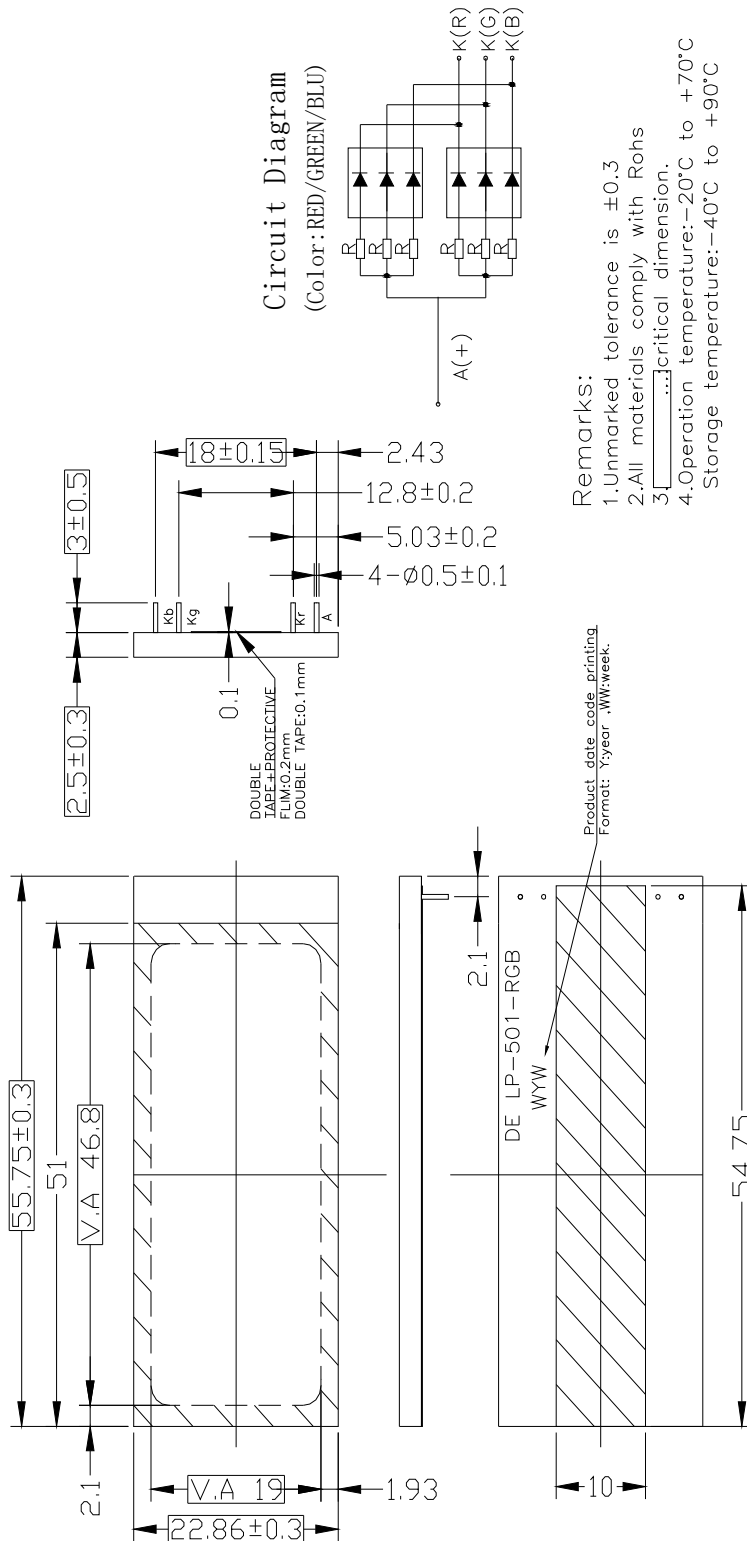
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1. FEATURES

Backlight Color: RGB

RoHS: Conformed

2. EXTERNAL DIMENSION (unit: mm)



**3. ELECTRICAL/OPTICAL SPECIFICATIONS**

Item	Symbol	RED			GREEN			BLUE			WHITE			Unit	Condition
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Forward Voltage	Vf		3.1	3.5		3.85	4		4.25	4.5		3.6	4	V	If= 30mA
Forward Current	If		30			30			30			90		mA	
Dominant Wave Length	$\lambda D$	620	630	640	515	525	535	465	470	475	—	—	—	nm	
Color Chromaticity	X	—	—	—	—	—	—	—	—	—	0.260		0.330		
	Y	—	—	—	—	—	—	—	—	—	0.260		0.330		
Uniformity	Avg	65			65			65			65			%	
Luminance	Lv		350	450		830	1000		200	350		1250	1500	cd/m <sup>2</sup>	
Reverse Current (Per LED)	Ir			10			10			10			10	$\mu$ A	Vr= 3.0 V
Lifetime	50000(brightness reduce half)								Hours						

**4. ACCEPT QUALITY LEVEL (AQL).**

4.1. AQL standard value: Critical defect =0, Major defect=0.65; Minor defect =2.5.

4.2. Inspection Plan: ANSI Z-1.4, Normal Inspection Level II, Single Sampling Plan.

**5. RELIABILITY TEST**

Test Item	Test Condition
High Temperature Storage	+90°C x 96h
Low temperature Storage	-40°C x 96h
High Temperature Operation	+70°C x 96h
Low Temperature Operation	-20°C x 96h
High Temperature, High Humidity	60°C x 90%RH x 4 Weeks
Thermal Shock	-20°C x 30min → 25°C x 10s → +70°C x 30min x 5 Cycles
Vibration Test	Frequency x Swing x Time 40Hz x 4mm x 4h
Drop Test	Height x Number of drop 1.0m x 6 drops