

Preliminary Product Specification

MODEL NO: VAOLS-1SR1103A

Rev.	Item	Response	Date	Note
A.0	New issue	V.C.	2011/06/14	

APPROVED	CHECKED	PREPARED





1. Production Description:

This light guide is applied to Lighting.

2. Application Areas:

- Back light Lighting.
- Advertisement Lighting
- Plant Lighting.

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3. Production specification:

Electrical and optical characteristics (Ta=25°C)

No.	Parameter	Symbol	Condition	Color	Min.	Тур.	Max.	Unit
1	Forward Voltage	V_{F}	I _F =350mA	Red		2.1	2.5	V
2	Reverse Voltage	V_R		Red			5	V
3	Illuminance	Iv avg	I _F =350mA	Red		680		lux
4	Uniformity of Illuminance	△Iv	I _F =350mA	Red			40	%
5	LED Junction Temperature	RTHJS		Red			135	°C





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No.	Parameter	Symbol	Condition	Color	Min.	Тур.	Max.	Unit
6	Wavelength	λd	I _F =350mA	Red	620		630	nm
7	Effective Width						130	mm
8								

Note.

4. Test Conditions:

Optical characteristics are maesured by Lux meter measuring machine. The measuring Position is optical reading center on the pipe top.

Illuminance Intensity (Iv)

Iv is defined by the average illuminance in the effective width.

Uniformity of Illuminance

 Δ Iv is defined by the average illuminance in the effective width. The sample with measured Iv data are prepared by VCC. Δ Iv is determined from the following expression.

$$\Delta Iv = \frac{\text{Iv max.} - \text{Iv min.}}{\text{Iv max.} + \text{Iv min.}} * 100\%$$

(Iv max. is the measure maximum value of illuminance in the effective width.) (Iv min. is the measure minimum value of illuminance in the effective width.)





^{1.} The illuminance tolerance is about +/- 10%.



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5. Cautions on Handling

Do not touch the area of a light pipe acrylic with empty hands or dirty materials. Please keep clean. If dirty, wipe it with a dried soft cloth and remove the dirt on it. Never wipe it with a wet cloth using water, alcohol or other liquids.

The LEDs are easily broken by static electricity stress, Green and Blue LEDs are especially weak. Wearing the adjustable wrist strap is required while handling or assembling the light source (ESD Class II).

6. Maximum Ratings

Item	Specifications	Remarks
1.Storage Temperature	-20 ~ +60°C	
2.Operational Temperature	+15 ~ +50°C	
3.Storage Humidity	10 ~ 90%RH	
	non-condensing	
4.Operational Humidity	10 ~ 80%RH	
	non-condensing	
5.Operating Maximum Current	350 mA	Max DC operating current







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7. Reliability Test

No	Item	Test Condition	Criterion	Sample
1	Temperature Cycle Test	$-25^{\circ} \text{C} \rightarrow 25^{\circ} \text{C} \rightarrow 70^{\circ} \text{C}$ $(30 \rightarrow 5 \rightarrow 30 \text{ min.})$ 50 cycles		6pcs
2	Low Temperature Test	-25±5℃ 500H		6pcs
3	High Temperature Test	70°C 500H		6pcs
4	High Temperature and High Humidity Test	60±5℃, 85±5%RH, 500H		6pcs
5	Life Test	Room temperature If =350mA (DC current) 500H	VF1<(Maximum Spec.)*1.3 ΔIV<(Maximum Spec.)*1.2 IV>(Initial)*0.5	6pcs
6	Vibration Test	10 →55 → 10 Hz C/T = 1 min Amp. = 2 mm 3 directions (x, y, z) 1 H		6pcs
7	Drop Test	6 sides (± x , ± y , ± z) 75 cm (at packing)		1 packing
8	Electrostatic Discharge	Energy-Storage Capacitor: 150pF Discharge Resistor: 330Ω Threshold (HBM)note1: 2000V		6pcs

Note1: Product resistance to electrostatic discharge (ESD) according to the HBM is measured by Simulating ESD using a rapid avalanche energy test (RAET). The RAET procedures are designed to approximate the maximum ESD ratings shown. The RAET procedure is performed on each die. The ESD classification of Class 2 is based on sample testing according to MIL-STD-883E.







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8. Dimension:





