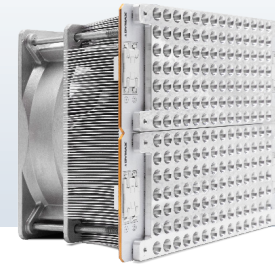


LE-A196

Light Engine

Data Sheet



Product Overview

The LE-A196 product series are UV-LED light engines that offer a complete solution system for applications that require high intensity and uniform light distribution on a large area. The light consists of 196 attached on each PCB to boost the performance of the light engine and thermal management system (graphited based thermal interface layer, heatsink and a 24V high power fan). Furthermore, a thermistor is attached on each PCB to monitor the temperature of the system.

The light engine is available in 3 standard wavelengths: 365, 385, 405 nm.

Specifications

Parameter	Symbol	Condition	TYP Value	Unit
Number of LEDs	N	-	196	-
Operating Ambient Temperature	T_{amb}	0-65%	10-40	°C
Storage Temperature	T_{stg}	Unbiased, 10-80% RH, non-condensing	-40-100	°C
Operating System Temperature	T_{opr}	I_{max}	< 69	°C
Maximum Current	I_{max}	T_{amb}, T_{opr}	19.6	A
Maximum Voltage	V_F	I_{max}, T_{opr}	54	V
Emitting Window	L x W	-	127 x 127	mm ²
Total Radiant Flux	PO	I=14A, T_{LED} =25°C, 50% RH, λ =365nm	360	W
		I=14A, T_{LED} =25°C, 50% RH, λ =385nm	420	
		I=14A, T_{LED} =25°C, 50% RH, λ =405nm	400	
Irradiance ¹	E	I=14A, T_{LED} =25°C, 50% RH, λ =365nm	1.8	W/cm ²
		I=14A, T_{LED} =25°C, 50% RH, λ =385nm	2.2	
		I=14A, T_{LED} =25°C, 50% RH, λ =405nm	2.1	
Uniformity ²	U	I_{max}, T_{LED} =250C, 50% RH	38	%
Thermistor Impedance	R_{TH}	T_{opr} =25°C	10	k Ω
B Constant	$B_{25/50}$	-	3900	K

¹Irradiance is measured with the following parameters:

- I. Working distance: 25 mm
- II. Measurement location: At center of the emitting window size
- III. Using ACCU-CAL™ in 'Flood-Peak Intensity' mode
- IV. Fan setting:
 - a. Electrical Input
 - b. Rated Speed: 6550 min⁻¹

²Uniformity is measured with the following parameters

- I. Working distance: 25 mm
- II. Measurement location: Vertical and Horizontal line of the cross section on the emitting window size
- III. Calculated using: $(E_{-} - E_{+}) / (E_{-} + E_{+})$
- IV. Using ACCU-CAL™ in 'Flood-Peak Intensity' mode
- V. Performed with light engine is attached on the thermal interface layer and heatsink

Features

- Surface mount technology
- High thermal conductivity metal core-based PCBs
- 127 mm x 127 mm emitting area
- 196 LEDs
- 4 poke-in type connectors
- 2 NTC thermistors

Typical Applications

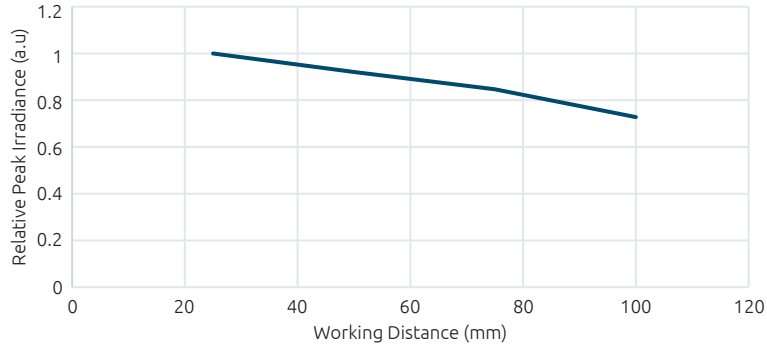
- UV Curing
- Printing



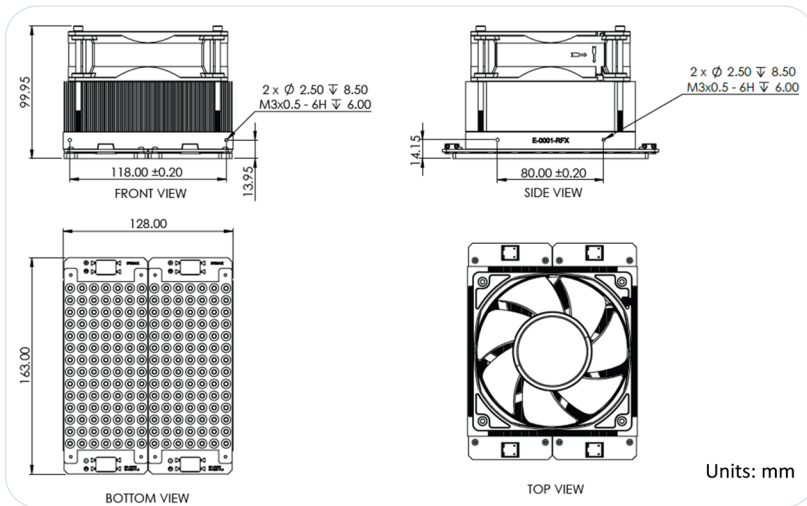
ALEO LE-A196 Light Engine

Performance Charts

Irradiance vs Working Distance



Dimensions



Please note that most applications are unique. ALEO does not warrant the fitness of the product for the intended application. Any warranty applicable to the product, its application and use is strictly limited to that contained in ALEO standard Conditions of Sale published on our website. ALEO recommends that any intended application be evaluated and tested by the user to ensure that desired performance criteria are satisfied. ALEO is willing to assist users in their performance testing and evaluation. APDS01



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