LITEGRAFX

LED Light Panel Product Specification

Model No.: LG03600360 Rev A

1. General Description

The LG03600360 is a LED illuminated light panel which utilizes top and bottom edge mounted Light Emitting Diodes (LED) and an engraved acrylic light guide to create a high brightness large area illuminated panel.

The light guide assembly is designed and constructed for both indoor and outdoor applications. Proprietary optical encapsulation of the entire LED light module ensures long term reliability for outdoor applications. Additionally a high efficiency thermal design ensures LEDs operate at a temperature for long term reliability.

Standard configurations are available for indoor and outdoor use and with or without an integrated brightness control model. Two LED colors are available on all standard panels.

2. Panel Specifications:

Parameter	Specification	Unit	Remarks
Illuminated Area	34.5”(W) x 34.5” (H)	Inch	
Outline Dimension	36.0”(W) x 36.0” (H) x 0.75” (D)	Inch	
Operation Temperature	-30 to 50	^{o}C	
Weight	~30	Lbs	Typical
Storage Temperature	-30 to 70	^{o}C	

3. Electrical Specifications:

3.1 Electrical Characteristics

Parameter	Min.	Typ.	Max.	Units	Remarks
Operating Voltage	23.0	24.0	25.0	Vdc	
Operating Current	-	-	1920	mA	Note 1
Power Consumption	-	-	46.0	watts	
Operating Current	892	1050	1207	mA	Note 2
Power Consumption	21.3	25.1	28.9	watts	

Note 1: Operating current and power consumption is based on a panel configuration without a pre-set brightness control module

Note 2: Operating current and power consumption is based on a panel configuration with a pre-set brightness control module

3.2 Light Panel Interface Pin Assignment

Connector /pin number	Symbol	Description	Remarks
Connector 1 Pin 1	V+	Panel power	24 Volt DC typical (Red wire)
Connector 1 Pin 2	Gnd	Power Supply Ground	0 Volts (Blue Wire)
Connector 2 Pin 1	V+	Panel power	24 Volt DC typical (Red wire)
Connector 2 Pin 2	Gnd	Power Supply Ground	0 Volts (Blue Wire)

Mating Connector part is Molex 39-01-3028 (receptacle) and Molex 39-00-0039 (socket) or equivalent.

4. Illumination Specifications:

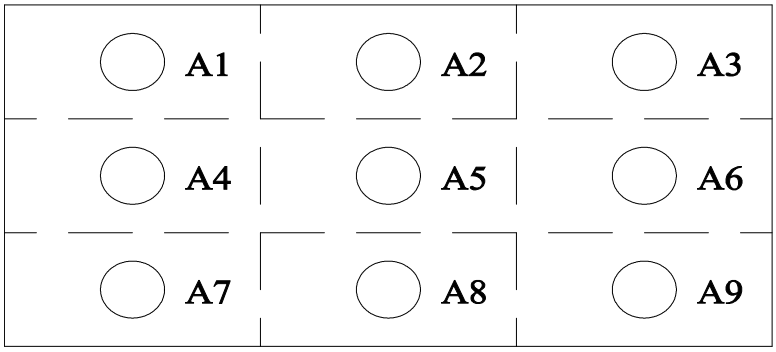
Parameter	Min.	Typ.	Max.	Units	Remarks
Panel Brightness	-	3000	5500	Lux	Note 1
Brightness Uniformity	75%	85%	-		Note 4
LED Color temperature	4750	5250	5750	^{o}K	Note 3
LED lifetime	60,000	-	-	hrs	Note 2

Note 1: Panel brightness is measured at the center of the panel. Typical brightness is based on a panel configured with an integrated brightness control module included. The maximum brightness is based on a panel without a brightness control module installed.

Note 2: Lifetime is defined as the time when the LED panel brightness reaches 70% of the original brightness.

Note 3: Based on neutral white LED

Note 4: Panel Uniformity is measured by measuring the brightness in the center of each of nine sectors of the panel and calculating the uniformity as follows:



$$\text{Uniformity \%} = \left(1 - \frac{(A_{max} - A_{min})}{A_{average}}\right) \times 100$$

5. Quality Assurance:

LED light panel, LG02000160 has been qualified to the following testing protocol.

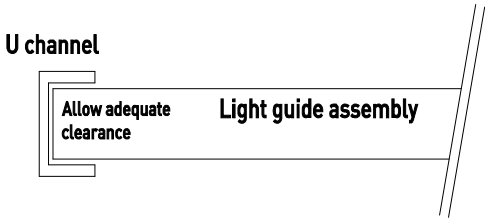
No.	Test Description	Test Parameters	Remarks
1	High Temperature Storage Test	70 ^{o}C for 500 hours	
2	Low Temperature Storage Test	-30 ^{o}C for 500 hours	
3	High Temperature, High Humidity	40 ^{o}C for 240 hours	

6. Mounting and Handling Precautions

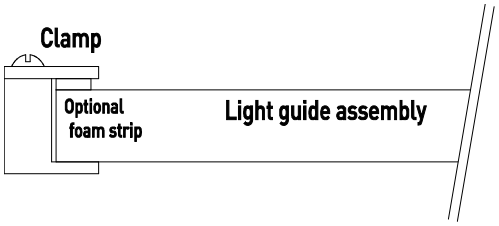
The surface of the light guide is made from Acrylic sheet which is susceptible to scratching and damage if mishandled. Sharp objects or abrasive materials should never be allowed to contact the surface of the light guide.

The surface of the light guide is susceptible to damage from solvents and chemicals. Solvents, acids and corrosive chemicals should never contact the acrylic light guide. Cleaning of the light guide surface with a soft lint free cotton or polyester cloth with isopropyl alcohol is allowed. Mounting of the light guide assembly is simple but precautions must be followed in order to prevent damage.

U-Channel Mounting: The light guide can be mounted in a U channel frame. Adequate clearance must be allowed so the light guide assembly is not forced into the channel. Closed cell foam sheeting or tape can be used to prevent the light guide assembly from moving in the channel.



Bezel Mounting: The light guide assembly can be mounted in a recess with a perimeter clamping bezel or tabs as shown below. Clamping must be along the perimeter frame. Clamping should never be applied directly to the acrylic sheet. Closed cell foam sheet between the clamp and the perimeter frame is preferred.

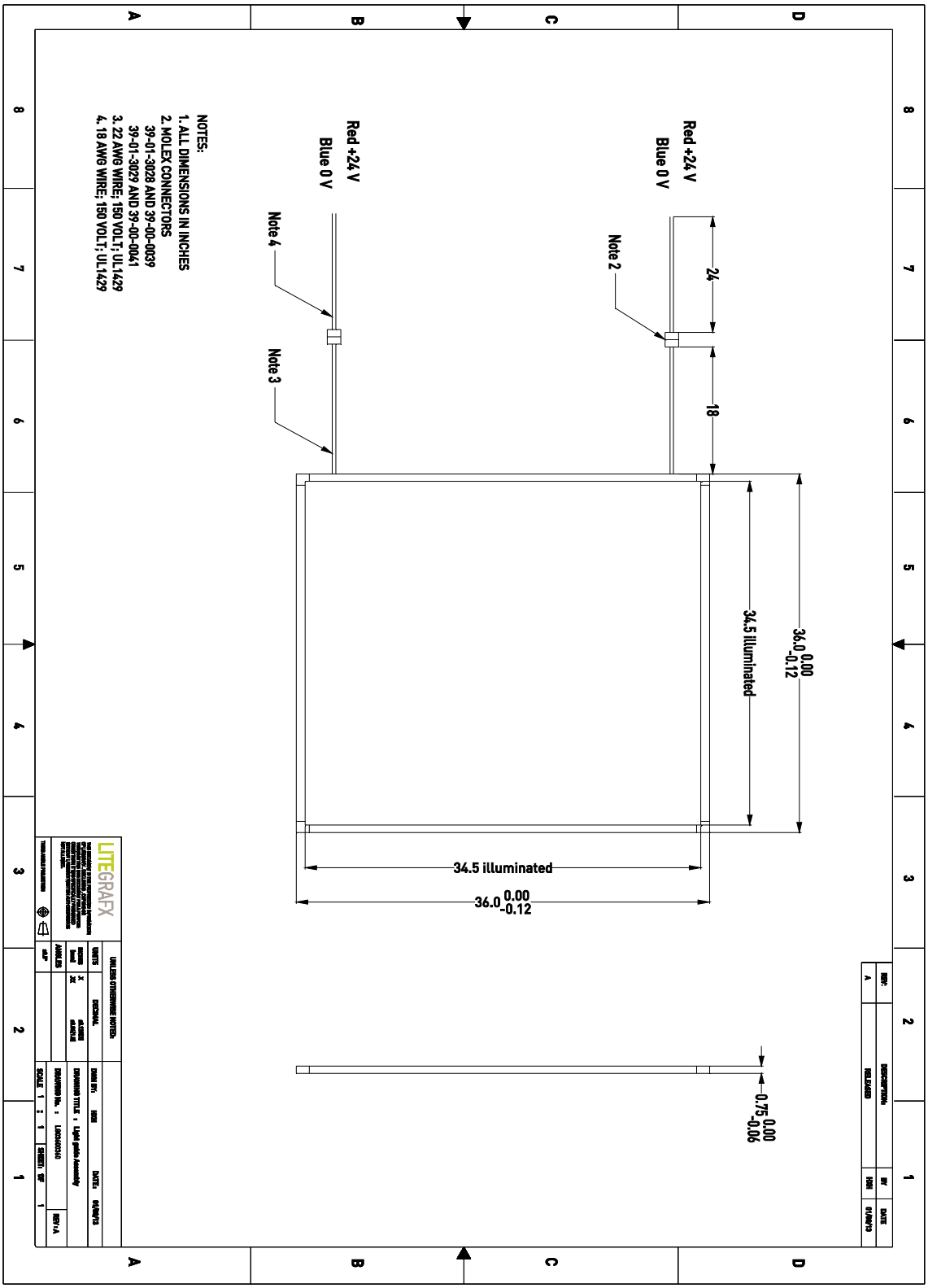


The light guide should never be connected directly to high voltage AC power sources. The LEDs and LED driver circuitry will be permanently damaged. Potential high voltage safety hazard will exist if high voltage is connected directly to the light guide. The supply voltage should never exceed the voltage limits defined in this specification.

Even if this light guide assembly is configured for outdoor applications the light guide is not suitable for submersion. Permanent damage to the light guide will occur if submerged. Even if this light guide assembly is configured for outdoor applications it is intended to be mounted in an appropriate weather resistant cabinet which will avoid direct precipitation on the light guide assembly.

Light guide wiring should be routed and secured to prevent rubbing, pulling, pinching or abrading of the insulation layer of the cable. Care should be taken to insure that long wiring extensions and cables to the light guide are rated to avoid excessive voltage drops reduce the operating voltage of the light guide below the minimum rated voltage specified.

7. Mechanical Drawing



8. Standard Configurations