

## **LLK-12 LED Lighting Enclosure Kit**

The LLK-12 LED lighting enclosure kit is a high-quality and highperformance multi-purpose solid-state lighting unit. The large aluminum heatsink provides high thermal conductivity, light weight and high strength for optimum performance of high power LEDs up to 12W of lighting. RGB or other specific coloured LED could be used for special effects or applications. The CNC machined plastic window cover and case provide a precision finish and look to the product. The LLK-12 is designed to perform in professional as well as general lighting applications. Whether you need a portable work/area light, video light, strobe or a headlight, the LLK-12 will provide years of maintenance-free service.



#### Features:

- Large aluminum heatsink, up to 12W
- CNC machined window and case
- Compact, small, light weight, durable
- Easy mounting and installation
- Easy to drill plastic and alumimum parts.
- Corrosion resistant parts and hardware
- High-power, multi-purpose design
- Assembly hardware included

#### Benefits:

- Maximise and maintains peak LED performance
- Configurable for various lighting applications.
- Efficient and low cost, long life illumination

### **Applications:**

- Portable lighting, area/architectural lighting
- Field-use lighting, automation lighting
- Machine vision lighting



LLK-12 LED Lighting Enclosure Kit parts



Assembled LLK-12 enclosure

Seeing with LED Lighting™

# **Technical Specifications:**

LLK-12 LED Lighting Unit: Dimension: 2.3"(W) x 3.3"(H) x 1.7"(D)

Material: 2.3 (W) x 3.3 (H) x 1.7 (D)

% CNC plastic body, black

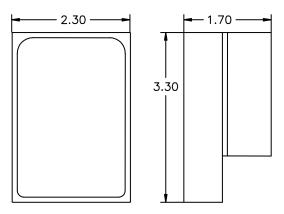
Aluminum LED mounting heatsink,

anodised black finish.

1/8" clear Lexan, CNC machined

Hardware: All stainless steel Cabling: PG7 gland for cable.

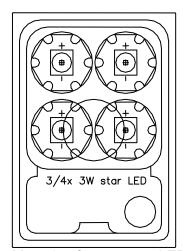
Weight: 130g

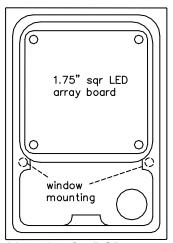


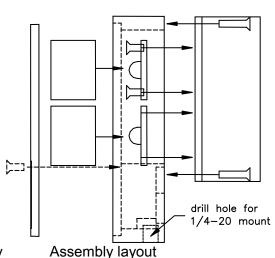
# DO NOT STARE DIRECTLY INTO THE LED LIGHT

## Assembly:

Maximise airflow to LED array for best performance. The LEDs and components get warm during operation. Do not install in an enclosed area or expose to high temperatures. LEDs are sensitive to heat and static. Use proper care during soldering and assembly. Follow the assembly and installation instructions for quick and easy installation.







Mounting for star-type LEDs

Mounting for PCB-type array

1. Put LED heatsink on the back of the plastic shell. Center and align on large hole. Mark-off mounting holes on plastic shell. Trace inside clearance area of plastic shell on heatsink. Drill with 3/32" drill bit to 3/8" depth. Thread holes to 4-40 thread.

2. If 1/4-20 mount is required. Drill bottom on plastic shell with 7/32" hole to 1/4" depth. Thread 1/4-20.

- 3. If using 4-40 screws for LED mounting, drill with 3/32" and thread to 4-40. If using 2-56 screws, drill holes with 5/64" bit.
- 4. The clear window can be glued or mounted onto the plastic case. Drill and thread 4-40 on plastic case. Drill and taper for 4-40 screw on clear window plate.
- 5. Thread PG7 gland into hole. Insert power cable into PG7 gland. Tighten.
- 6. Mount LED array onto heatsink with appropriate heat transfer method. Mount heatsink onto plastic case. Do not over tighten screws.
- 7. Solder LEDs and LED driver if necessary. Connect power to LED array.
- 8. Glue or mount window plate onto plastic case.
- 9. Test LED light.



### LLK-12 Parts:

Bill-of-Materials for LLK-12 LED lighting heatsink enclosure kit.

Enclosure, heatsink, window and hardware.

| Part           | QTY | Application                             | Description                    |
|----------------|-----|---|--------------------------------|
| BPS-LL-05      | 1   | LED plastic shell                       | 2.3"x3.3" 3/4" thick CNC       |
|                |     |   | machine shell                  |
| HSK-LL-02      | 1   | LED heatsink                            | LED heatsink, 2.3"x2.4"        |
| WCF-LL-05      | 1   | Window cover plate                      | 1/8" clear Lexan window.       |
| HWG-LWTPG7-1   | 1   | PG7 wire strain relief, 1/8"-1/4" cable | PG7 cable gland, black         |
| HWF-BLTI406-01 | 4   | HSK-LL-O2/BPS-LL-05 mounting, center    | 4-40 x 3/8" flat head phillips |
|                |     | hole                                    | drive bolts, SS                |
| HWF-BLTI404-02 | 10  | PCB/Star-type LED mounting hardware/    | 4-40 x 1/4" flat head phillips |
|                |     | window mounting                         | drive bolts, SS                |
| HWF-BLTI202-01 | 8   | PCB/Star-type LED mounting hardware     | 2-56 x 1/8" pan head phillips  |
|                |     |   | drive bolts, SS                |

# Required materials for LLK-12 LED lighting unit.

# LEDs, LED lens and holder, LED driver

| Part        | QTY | Application                            | Description                  |
|-------------|-----|--|------------------------------|
| LED array   | 1   | 1-4 high brightness star-type LED or   | LED array. Star-type or PCB- |
| -           |     | 1.75" square LED array.                | type.                        |
| Power cable | 1   | LED power cable, 2 conductor           | Power cable, 2 conductor     |
| LED driver  | 1   | Provide constant current to LED        | LED driver and regulator,    |
|             |     |  | 12V, 0.75A.                  |
| Collimator  | 1-4 | Plastic holder for lens collimator     | Lens holder                  |
|             | 1-4 | Various lens for different beam angles | 20mm Lens collimator         |
|             |     |  |                              |