



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# 10.2" Fingerboard Module

LED Light Engine with 64 Nichia LEDs

Intelligent Device  
**ECOSYSTEM**  
Classic

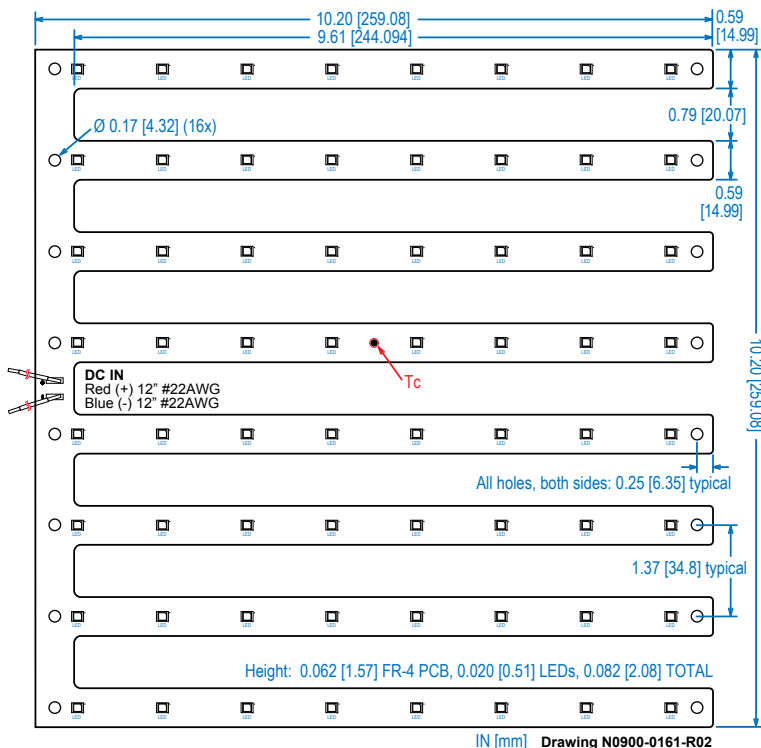
## Specifications

Driver Type:	Constant-Current
Drive Current:	700mA Nominal
Nom. Forward Voltages:	22.5V
Total Board Power:	16.7W Nominal
Life:	50,000 Hrs @70% lumen maint., if used as specified (current & heat)
Max Junction Temp:	90°C
Max Test Point Temp:	80°C
Operating Temp:	-40°C to +60°C Ambient
Storage Temp:	-40°C to +80°C
Viewing Angle (FWHM):	120° Lambertian distribution
CRI:	83 typical



- Constant-Current DC Array, 8 LED Series x 8 Parallel Strings
- Designed for easy use in standard luminaires
- Tight LED pitch eliminates pixelization
- Color: ¼ ANSI Binning, 3 Step MacAdam Ellipse
- Suggested Applications: Surface-mount, Recessed or Suspended lighting
- Customizable: Engines can be modified to your application. Contact us.
- Engineered by Norlux
- 5 yr. Warranty

## Dimensions



## 10.2 Inch Fingerboard DC LED Module

Model	Color Temp (K)	Total Current (mA)	Total Board Power (W)	Lumens (± 15%)	Board LPW
98006	3000	350	7.9	1,134	144
		700	16.7	2,180	131
98007	3500	350	7.9	1,190	151
		700	16.7	2,215	137
98008	4000	350	7.9	1,221	155
		700	16.7	2,353	141
98033	5000	350	7.9	1,259	159
		700	16.7	2,426	145

## Connectivity Options

Suffix	Connection
(blank)	12 IN, #22 AWG Stranded Leads
-01	No Leads
-02	Push-in Connectors

For Poke-In Connectors, use #24-18 AWG stranded or solid wire

★ **MADE IN USA** ★  
Of Imported And Domestic Components





### CIE Chromaticity Coordinates

#### 3000K

3 Step Macadams Ellipse

X	Y
0.4325	0.4101
0.4452	0.4146
0.4244	0.3923
0.4362	0.3965

#### 3500K

3 Step Macadams Ellipse

X	Y
0.4045	0.3975
0.4189	0.4044
0.3989	0.3819
0.412	0.3875

#### 4000K

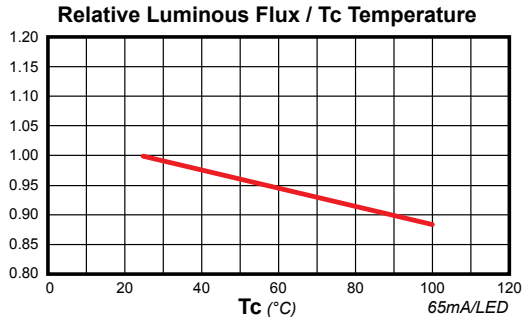
3 Step Macadams Ellipse

X	Y
0.3783	0.3836
0.3909	0.3906
0.3746	0.3687
0.3864	0.3757

#### 5000K

3 Step Macadams Ellipse

X	Y
0.3408	0.3461
0.3485	0.3520
0.3416	0.3585
0.3499	0.3644



### Step Dimming:

This Light Engine can be step-dimmed, with a recommended TRP dimmable driver and SD series step-dimming module. See the SD2 or SD3 data sheet for wiring information.

### Compatible TRP Drivers:

These are all compatible with this module. Choose the best driver for your application.

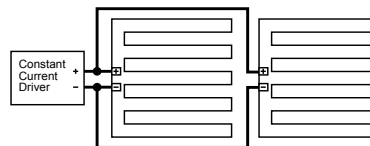
- LED12W-36-C0350
- LED17W-036-C0470
- LED17W-024-C0700
- LED20W-057-C0350
- LED20W-057-C0350-D
- LED20W-43-C0460
- LED20W-43-C0460-D
- LED20W-40-C0500
- LED20W-40-C0500-D
- LED20W-36-C0550
- LED20W-36-C0550-D
- LED20W-28-C0700
- LED20W-28-C0700-D
- LED20W-40-C0350-LE
- LED20W-40-C0350-TE
- LED20W-40-C0500-LE
- LED20W-40-C0500-TE
- LED25W-48-C052-TE
- LED25W-36-C0700-HL-SD
- LED25W-36-C0700-LE
- LED25W-36-C0700-TE
- LED30W-066-C0450
- LED30W-066-C0450-D
- LED30W-42-C0700
- LED30W-42-C0700-D
- LED35W-054-C0700
- LED35W-054-C0700-D
- LED40W-054-C0700
- LED40W-054-C0700-D
- LED50W-72-C0700
- LED50W-72-C0700-D

### Series/Parallel Configurations

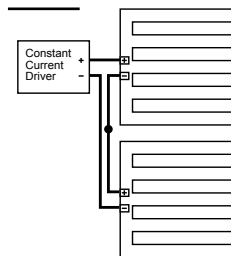
**Parallel:** The positive and negative of one board is connected to the respective positive and negative of the next. Current adds, so the supply must be 2x the current for 2 boards.

**Series:** The negative of one board is connected to the positive of the next. Voltage adds, so the supply must be 2x the voltage for 2 boards.

#### Parallel



#### Series



### Maximum Run Lengths

The max number of boards wired in a chain (**series**) is limited by the max current rating of the first board wired to the driver. The sum of the board currents, in the chain, funnels through the first board. Multiple chains can connect directly to the power supply in parallel. See table for max chain length.

Product	Series/Parallel	Max Allowable Boards	
		High Current (Nom)	Low Current
Fingerboard	Series	4	9

### Mounting Notes

The LED assembly is supplied with mounting holes, per the dimensional drawing. It is important to mount the board in such a way as to maintain the Tc point below the max. The steady state thermals in application will dictate if the board needs to be mounted directly to metallic housing and/or include a thermal pad. For example fully enclosed recessed fixture will require better thermal mounting than an open air pendant.

### Thermal Application Notes

**This board requires additional heat sinking to run above 70°C ambient** at nominal specifications. Heat sink is also required when operated above specified drive currents.

### Maximum Current

**Max Current: 1440mA**

**Voltage at max current: 27V, Power at max current: 38.9W**

The total maximum current reflects the LED maximum forward current only, without considering thermal needs. Driving the LEDs this hard will likely violate their thermal limits, depending on the application. **Tc point must remain at or below the max temperature, or the warranty will be voided.** Temperature is directly correlated to LED current.

### Static Sensitive Device

Handle only at static-safe work stations.

### Packaging

50 per box standard.