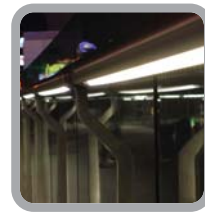


Catalog #		Type
Projects		
Comments		Date
Prepared By		

LED's **HAND RAIL SERIES™** is an optimized linear LED light system designed to accommodate maximum run lengths without lamp output reduction. The system employs state of the art low drop out current regulators, to assure uniform brightness over run lengths in excess of 100 linear feet (30,480mm) for Class I installations. LED's **HAND RAIL SERIES™** system is based on the use of P 4 Super Bright LEDs mounted on rugged fiber glass circuit boards.

LED's **HAND RAIL SERIES™** system outputs are available in warm white (3200K +/- 12%) or neutral white (4200K +/- 12%) lights. The system features interconnected modules that will provide scallop free illumination. The lens mount system is configured to allow two discreet lighting view angles: 90° and 60°. This mount system is made of UV stabilized polycarbonate, assuring long life with-out discoloration. The LEDs are batch-sorted Nichia, representing one of the highest quality manufacturers in the industry. This insures consistency in light output as well as desired color temperature!



Features:

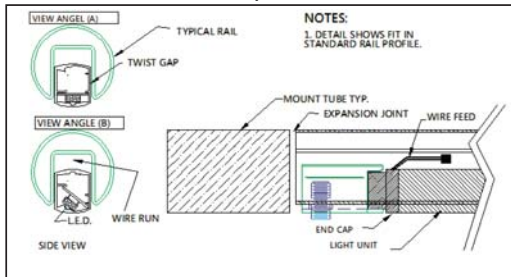
- Batch-sorted Super Bright Nichia P4 Dip LEDs
- 0.6" on center LED spacing
- 100 lumens per foot light output
- Available in 90° or 60° viewing angle
- 2.7 watts per foot power consumption
- Max run: 100 FT with class I power supply; 40 FT with class II
- Waterproof bi-pin connector
- ETL wet location listed
- IP 66 rated
- Rated for indoor and outdoor use.

Applications:

- Pedestrian Bridge Handrails
- Elevation Shift Rails
- Guard Rails
- Stair Handrails
- Pathway and Safely Illumination Rails
- Accent Lighting Rails

DIAGRAMS:

DIAGRAM: Concept Mount Detail 1A



ENVIROMENTAL SPECIFICATIONS:

- Temperature Range: 7.6F thru 131F National Regulator Includes Thermal Shut Down At 95C
- Product rating: IP 66 (Dry, Damp, Wet)

Ordering Information:

HRL					
Series	Voltage	Color	Beam Spread	View Angle	Length
	24DC	NW (Neutral White) WW (Warm White) *Other Colors Available	60 deg 90 deg *see Diagram	P (Perpendicular) O (Offset)	0.5ft 3ft 1ft 4ft 2ft 5ft *Custom Length Available in 2.5" increments *Provide Overall Length of Each Handrail Section *Quoted in 1ft Increments



Ordering Example: HRL-24DC-NW-60-P-4

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SYSTEM SPECIFICATIONS:

-Light Source	Batch Sorted Super Bright LEDs
-Technology	P-4 Dip LEDs
-Lamp Spacing	0.6" O/C Spacing
-LED Rated Maximum Current	50mA
-LED Rated Drive Current	28mA
-On Board Regulation	National Regulator
-System Lumens per/ft	100 lm per/ft
-Viewing Angle	100 Degree Specified/ 60 Degree Optional
-Housing	Custom Sealed Polycarbonate Profile with Molded End Caps
-Mounting	Specified Clip Systems (See Concept Detail 1A)
-Components	To be used with specified project components

ELECTRICAL SPECIFICATIONS:

-Compliance	Meets or Exceeds UL, C-UL, CSA, CE
-Listing	Listed ETL Wet Location
-Connector	Waterproof Bi-Pin (AMP)
-Power Requirement	22VDC-28VDC
-PCB Material	FR-4 .032" with Dow Corning Conformal Coating
-Power Consumption	112mA Per/Ft.
-Class I Max Run Length (10A)	100 ft.
-Class II Max Run Length (4.1A)	40 ft.
-Power Supply	Class II Listed 24VDC Power Supply (Size and Type based on Field Requirements) Allowable Voltage Drop 7 Volts D.C.

GENERAL INFORMATION

- #1 Light output and color temperature has been approved and accepted by ownership .
- #2 Wire path and routing to be based on field conditions.
- #3 Photometrics is based on selected options. View angle A is vertical @ 100 degrees beam / View angle B is based on 60 degrees offset angle, with a 60 degree led. Final criteria to be determined per selected location.

DIAGRAMS CONTINUED:

Measurements inches/mm

