



- NELM Light Source with Flat Lens



- NELM Light Source with Dome Lens

Product Description

New Energy LED modules (NELM) provide lighting designers and manufacturers with simple, easy-to-adopt LED lighting solutions that reduce luminaire development time and speed time-to-market. New Energy modules are the ideal choice for enabling rapid luminaire development where bright, beautiful, long-life lighting is required. The ease of use of the NELM series enables this versatile LED lighting module to jump-start the design process for recessed downlights, wall sconces or pendant lights in demanding end markets such as retail, museums and studio lighting.

Features

- Industry-leading light-source efficacy (steady state) of up to 97 lm/W or better for all luminous flux outputs
- 850-4000 lm available in 2700K, 3000K, 3500K and 4000K
- > 90 CRI for all color temperatures CCTs
- Designed to last 50,000 hours at L70
- Easy mounting - designed for quick mounting to a housing or bracket
- RoHS compliant
- ETL Recognized
- Custom - private label or design changes available
- ETL certified for damp locations

Last modified: 01/18/2024

TABLE OF CONTENTS

NELM Performance Specifications	2
NELM Order Codes	3
Thermal Management Guidelines	4
Relative Spectral Power Distribution	5
Relative Luminous Flux vs. Case	
Temperature	7
Typical Voltage vs. Case Temperature	7
Photometric Distributions	8
Performance Groups - Chromaticity	10
CIE Color Space.....	10
Mechanical Dimensions	11
Packaging	12



RoHS

NELM Performance Specifications

Product Selection Table

Characteristics	Unit	Minimum	Typical	Maximum
Viewing angle (FWHM) - Standard flat lens	degrees		86	
Viewing angle (FWHM) - Standard dome lens	degrees		102	
Viewing angle (FWHM) - Performance flat lens	degrees		82	
Viewing angle (FWHM) - Performance dome lens	degrees		102	
DC forward current - Standard 850 lm	mA	180	190	200
DC forward current - Standard 1250 lm	mA	280	300	320
DC forward current - Standard 2000 lm	mA	490	530	560
DC forward current - Performance 3000 lm	mA	680	710	750
DC forward current - Performance 4000 lm	mA	960	1040	1100
Forward voltage - Standard 850 lm	V		33.4	33.5
Forward voltage - Standard 1250 lm	V		34.4	34.6
Forward voltage - Standard 2000 lm	V		36.2	36.4
Forward voltage - Performance 3000 lm	V		33.7	33.8
Forward voltage - Performance 4000 lm	V		34.6	34.8
Luminous flux - Standard 850 lm	lm	860	865	869
Luminous flux - Standard 1250 lm	lm	1274	1292	1324
Luminous flux - Standard 2000 lm	lm	1997	2031	2079
Luminous flux - Performance 3000 lm	lm	2996	3012	3025
Luminous flux - Performance 4000 lm	lm	3972	4008	4031
LED module case temperature (Tc)	°C		55	85
CRI - 90 CRI	100-point scale	90	92	
CRI - 95 CRI	100-point scale	95	98	

NOTES:

- NELM modules are not designed for reverse bias operation.
- New Energy maintains a tolerance of $\pm 7\%$ on flux measurements, $\pm 10\%$ on power measurements, ± 0.005 on chromaticity (CCx, CCy) measurements and a tolerance of ± 2 on CRI measurements.
- 55 °C measured at case temperature (Tc) point shown on page 6.
- Luminous flux values for the flat lens NELM LED module can be up to 3% lower.

RoHS COMPLIANCE:

The levels of RoHS restricted materials in this product are below the minimum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU Directive 2011/65/EC (RoHS2), as implemented January 2, 2013. RoHS Declarations for this product can be obtained from a New Energy, LLC representative.

RoHS COMPLIANCE:

Users should be cautioned not to stare at the light of this LED product. The bright light can damage the eye.

NELM Performance Specifications

Order Code Formatting

Product Family	Typical Luminous Flux (lm)	CCT (K)	CRI	Order Code	
				Flat	Dome
NELM	XX/XX/XX		XX	F	D
NELM	850/1250/2000	2700	90	NELM-85/12/20-27-90-F	NELM-85/12/20-27-90-D
NELM	850/1250/2000	3000	90	NELM-85/12/20-30-90-F	NELM-85/12/20-30-90-D
NELM	850/1250/2000	3500	90	NELM-85/12/20-35-90-F	NELM-85/12/20-35-90-D
NELM	850/1250/2000	4000	90	NELM-85/12/20-40-90-F	NELM-85/12/20-40-90-D
NELM	850/1250/2000	2700	95	NELM-85/12/20-27-91-F	NELM-85/12/20-27-91-D
NELM	850/1250/2000	3000	95	NELM-85/12/20-30-91-F	NELM-85/12/20-30-91-D
NELM	850/1250/2000	3500	95	NELM-85/12/20-30-91-F	NELM-85/12/20-30-91-D
NELM	850/1250/2000	4000	95	NELM-85/12/20-30-91-F	NELM-85/12/20-30-91-D
NELM	3000/4000	2700	90	NELM-30/40/00-27-90-F	NELM-30/40/00-27-90-D
NELM	3000/4000	3000	90	NELM-30/40/00-30-90-F	NELM-30/40/00-30-90-D
NELM	3000/4000	3500	90	NELM-30/40/00-35-90-F	NELM-30/40/00-35-90-D
NELM	3000/4000	4000	90	NELM-30/40/00-40-90-F	NELM-30/40/00-40-90-D
NELM	3000/4000	2700	95	NELM-30/40/00-27-91-F	NELM-30/40/00-27-91-D
NELM	3000/4000	3000	95	NELM-30/40/00-30-91-F	NELM-30/40/00-30-91-D
NELM	3000/4000	3500	95	NELM-30/40/00-35-91-F	NELM-30/40/00-35-91-D
NELM	3000/4000	4000	95	NELM-30/40/00-40-91-F	NELM-30/40/00-40-91-D

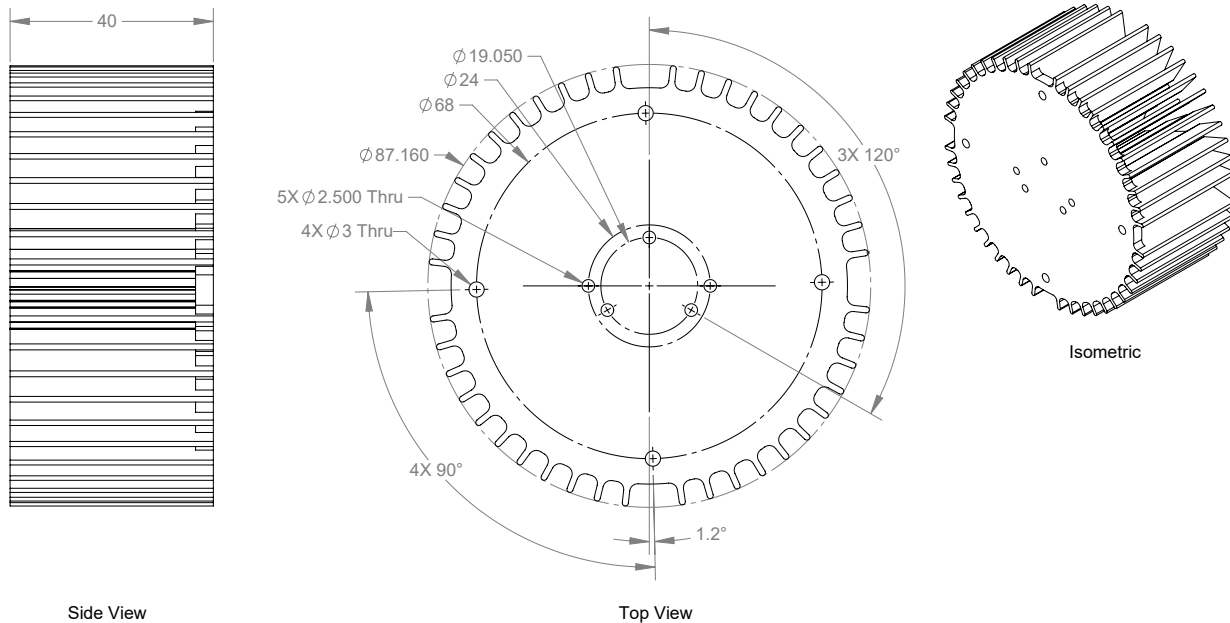
NELM Performance Specifications

Thermal Management Guidelines

The NELM is designed to perform in a variety of environments without the need for active cooling. To achieve lifetime and performance estimates, and to maintain the warranty, the final luminaire design cannot allow the Tc point shown on page 10 to exceed 85 °C for the light source when the luminaire is at thermal equilibrium. The optional heat sinks shown below are available from New Energy.

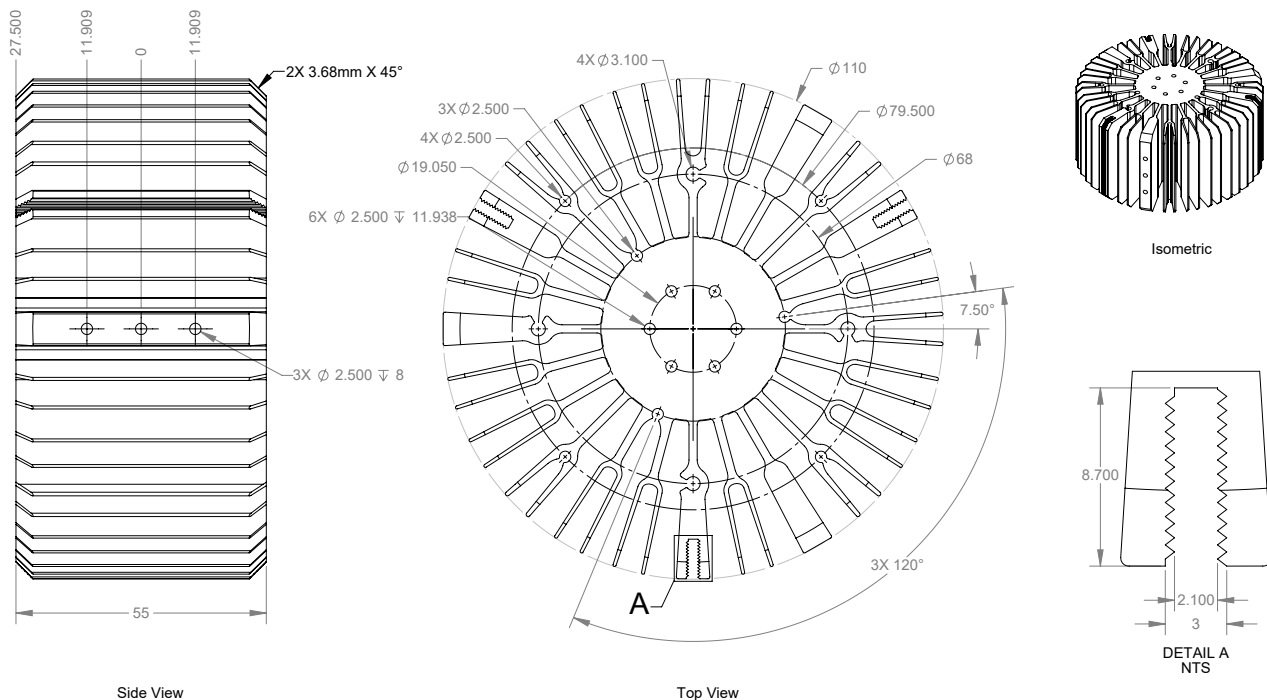
Disclaimer: Customer is responsible for proper thermal management.

OEM Option 1: NEHS-LM-30-XX Suitable for Standard Modules



Note: Dimensions in Millimeters

OEM Option 2: NEHS-LM-40-XX Suitable for Performance Modules



Note: Dimensions in millimeters