



# SQUARE MINI LED DOWNLIGHT

## MDSL2 RECESSED HOUSING AND TRIM LOW VOLTAGE

Project: \_\_\_\_\_

Fixture Type: \_\_\_\_\_

Location: \_\_\_\_\_

Contact/Phone: \_\_\_\_\_

### PRODUCT DESCRIPTION

The square mini LED recessed downlight is IC rated for insulated or non-insulated applications • Sleek, compact form factor provides direct accent lighting with low glare optic system that approximates the light output and distribution of 20W halogen lamps • Ideal for both residential and commercial limited space applications including niches, bookshelves, displays and cabinets • Remote mount Class 2 120V to 12V AC electronic or magnetic transformer required • Designed to provide 50,000 hours of life • 5 year limited warranty on LED components.

### ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- No harmful ultraviolet or infrared wavelengths
- No lead or mercury
- Comparable light output to 20W MR11 halogen lamps while consuming 5W

### PRODUCT SPECIFICATIONS

**LED Light Engine** High performance, low power LEDs provide outstanding reliability, performance and color quality/consistency • 2700K, 3000K, 3500K or 4100K color temperatures available • 80 CRI minimum.

**Optical System** Fixtures are offered with a choice of spot, narrow flood or flood beam patterns • LED source concealed with lensed optic is deeply regressed into an internal reflector to produce a low glare system • Reflectors finished to match trim ring color for uniform appearance • Field replacement of optical lenses is NOT recommended.

**Transformer** Requires remote mount Class 2, 120V to 12V AC electronic or magnetic transformer for operation • Juno TL602E electronic transformer and TL576 magnetic transformer are designed specifically for use with these fixtures.

**Dimming** May be dimmed with dimmers tested and qualified by Juno for use with TL602E and TL576 – see transformer specifications for compatible dimmers • Color temperature remains constant over dimming range • Consult factory for additional information.

**Life** Rated for 50,000 hours at 70% lumen maintenance.

**Labels** UL Listed for indoor damp locations and daisy chaining • Union made • UL and cUL listed • RoHS compliant.

**Testing** All reports are based on published industry procedures; field performance may differ from laboratory performance.

Product specifications subject to change without notice.

### HOUSING FEATURES

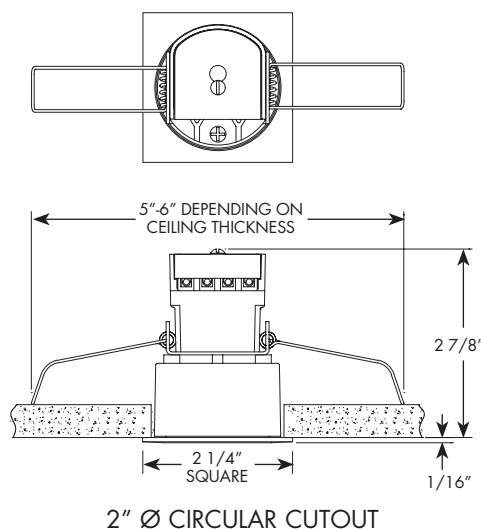
**Housing** Designed for use in IC (insulated ceiling) or non-IC construction • Die cast aluminum housing.

**Wiring Compartment** Provided with removable access plate • Four pole terminal block allows for quick, secure connection • UL /cUL listed for daisy chaining • Easy to wire with commonly available low voltage cable (Type CL2 or NEC equivalent, 18-12 AWG). Consult local codes for compliant wiring methods.

**Mounting** Tempered spring steel torsion clips are provided fully assembled to housing • Springs allow for fast, secure installation or removal in mounting surfaces from 1/8" to 1" thick material • 2" Cutout dimension corresponds to common hole saw size.



### DIMENSIONS



### ELECTRICAL DATA

Input Voltage	<b>12VAC</b>
Input Power	4.8W
Input Current	0.42A
Frequency	Varies with Transformer

### ORDERING INFORMATION:

Example: **MDSL2-27K-FL-WH**

#### Fixture

Catalog No.	Color Temp.	Optic	Finish
MDSL2	27K 2700K 3K 3000K 35K 3500K 41K 4100K	SP Spot NFL Narrow Flood FL Flood	WH White BL Black SN Satin Nickel BZ Bronze

#### Transformers

Catalog Number	Finish	Description
TL602E-10-WH	White	10W 12V AC Electronic Driver/Transformer
TL602E-25-WH	White	25W 12V AC Electronic Driver/Transformer
TL602E-60-WH	White	60W 12V AC Electronic Driver/Transformer
TL576-10-BL	Black	10W 12V AC Magnetic Driver/Transformer
TL576-25-BL	Black	25W 12V AC Magnetic Driver/Transformer
TL576-60-BL	Black	60W 12V AC Magnetic Driver/Transformer

# SQUARE MINI LED DOWNLIGHT

## MDSL2G2 RECESSED HOUSING AND TRIM

### LOW VOLTAGE

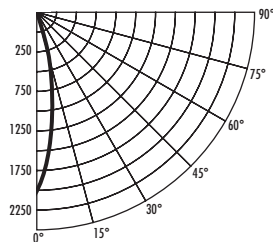
#### PHOTOMETRIC REPORT

Test Report #: PTO2140501R

Catalog No: MDSL2G2-35K-SP-WH

Luminaire Spacing Criterion: 0.34

Luminaire LPW: 67



#### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	2061
5	1701
15	437
25	67
35	13
45	5
55	2
65	1
75	0
85	0
90	0

Multiplier: 27K - 0.92  
3K - 0.96  
41K - 1.06

#### AVERAGE INITIAL FOOTCANDLES Multiple Units (Square Array, 60' x 60' room)

Ceiling 80%, Wall 50%, Floor 20%

Spacing	RCR1	RCR4	RCR8
4'	23	21	19
5'	15	13	12
6'	10	9	9
7'	8	8	7
8'	7	6	6
9'	5	5	4
10'	4	3	3

#### INITIAL FOOTCANDLES

One Unit, 5W, 19.6° Beam

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	128.8	1.4'
6	57.3	2.1'
8	32.2	2.8'
10	20.6	3.5'

#### LUMINANCE (Average cd/m<sup>2</sup>)

Degrees	Average 0° Luminance
45	11169
55	7031
65	5169
75	4544
85	1928

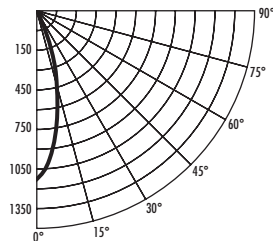
#### PHOTOMETRIC REPORT

Test Report #: PTO2140502R

Catalog No: MDSL2G2-35K-NFL-WH

Luminaire Spacing Criterion: 0.44

Luminaire LPW: 63



#### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1128
5	999
15	441
25	122
35	29
45	8
55	4
65	2
75	1
85	0
90	0

Multiplier: 27K - 0.92  
3K - 0.96  
41K - 1.06

#### AVERAGE INITIAL FOOTCANDLES Multiple Units (Square Array, 60' x 60' room)

Ceiling 80%, Wall 50%, Floor 20%

Spacing	RCR1	RCR4	RCR8
4'	23	20	18
5'	14	13	12
6'	10	9	8
7'	8	7	7
8'	6	6	5
9'	5	4	4
10'	4	3	3

#### INITIAL FOOTCANDLES

One Unit, 5W, 24.9° Beam

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	70.5	1.8'
6	31.3	2.6'
8	17.6	3.5'
10	11.3	4.4'

#### LUMINANCE (Average cd/m<sup>2</sup>)

Degrees	Average 0° Luminance
45	19723
55	12304
65	9542
75	8440
85	1928

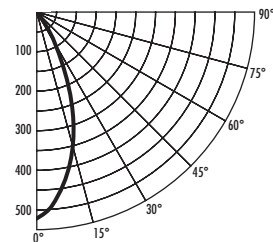
#### PHOTOMETRIC REPORT

Test Report #: PTO2140503R

Catalog No: MDSL2G2-35K-FL-WH

Luminaire Spacing Criterion: 0.62

Luminaire LPW: 55



#### CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	533
5	519
15	355
25	135
35	39
45	13
55	7
65	4
75	2
85	0
90	0

Multiplier: 27K - 0.92  
3K - 0.96  
41K - 1.06

#### AVERAGE INITIAL FOOTCANDLES Multiple Units (Square Array, 60' x 60' room)

Ceiling 80%, Wall 50%, Floor 20%

Spacing	RCR1	RCR4	RCR8
4'	18	16	14
5'	12	10	9
6'	8	7	6
7'	7	6	5
8'	5	5	4
9'	4	4	3
10'	3	3	2

#### INITIAL FOOTCANDLES

One Unit, 5W, 37.1° Beam

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	33.3	2.7'
6	14.8	4.0'
8	8.3	5.4'
10	5.3	6.7'

#### LUMINANCE (Average cd/m<sup>2</sup>)

Degrees	Average 0° Luminance
45	31367
55	21678
65	17096
75	12984
85	3856

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit at 12VAC in a 25°C ambient represents a baseline of performance for the fixture. Results may vary in the field and when multiple fixtures are used in a system.



1300 S. Wolf Road • Des Plaines, IL 60018 • Phone (847) 827-9880 • Fax (847) 827-2925

220 Chrysler Drive • Brampton, Ontario • Canada L6S 6B6 • Phone (905) 792-7335 • Fax (905) 792-0064

Visit us at [www.junolightinggroup.com](http://www.junolightinggroup.com)

Printed in U.S.A. ©2014 Juno Lighting, LLC.