

NC-631 / NC-636 / NC-638

6" Sapphire I Comfort Dim LED Reflectors

Source: 11W to 37W LED
850lm to 3000lm

PRODUCT DESCRIPTION

The Sapphire Series is an architectural grade LED downlight. The Sapphire Series features deep cone reflectors and dimmable LEDs. The reflectors have been designed for the high efficiency (LPW) while providing low aperture brightness. The Sapphire Series is proudly assembled in the USA.

Cree Comfort Dim technology with the highest performing commercially available LEDs and mixes in complementary light from red and unsaturated yellow LEDs to create beautiful, warm, white light. This patented approach enables precise color management to preserve reliable high color consistency over the life of the product.

FEATURES

- Cree Comfort Dim Technology
- Deep cone reflectors, wall wash and deco glass
- 850lm, 1250lm, 2000lm and 3000lm LED packages
- Gradually warms the color temperature from 2700K to 1800K when dimmed
- 10-year limited warranty
- ENERGY STAR certified
- cULus Listed for Wet Locations

ELECTRICAL

Delivered Lumens / Wattage: **L85** = 769lm / 11W; **L12** = 984lm / 16W; **L20** = 1838lm / 25W; **L30** = 2453lm / 37W

(Delivered lumens will vary depending on reflector and finish)

Comfort Dim: Comfort Dim color tunes the temperature from a bright 2700K, to a romantic and comfortable 1800K on a gradual, even curve.

CRI: 90+ CRI

Beam Spread: 74° Flood

Operating Temp.: 0°C to 45°C ambient temperature

Lifetime: 36,300 hours @ L70

COMPATIBLE FRAME-INS

Reflector is only compatible with respective Sapphire I series frames manufactured by Nora Lighting.

CATALOG NO.	DESCRIPTION
NCAH-630	6" Universal New Construction Frame-In
NCHR-634	6" Remodel Frame-In

SPECIFICATION

Reflector: Deep cone self flanged reflector spun from 0.050 high grade aluminum provides even illumination and visual comfort. The deep cone reflectors provide 55+ degree cut-off. NC-638 includes 3 studs mounted in the flange for attaching decorative glass. Decorative glass will reduce the amount of usable light by 10 to 30%, depending on the selected glass.

Reflector Assembly: The reflector assembly includes the LED optical package and heat sink mounted on top. Reflector assembly easily wires to dedicated frame with lockable quick connect.

Emergency: NC-631 is compatible with integral emergency test switch, must specify.

LABELS AND LISTINGS

- cULus Listed for Wet Location when used with compatible frame-in
- ENERGY STAR certified
- [10-Year Limited Warranty](#)
- RoHS Compliant



Type

Project

Catalog No.

Notes

PRODUCT IMAGES & DIMENSIONS



6" Sapphire I Comfort Dim LED Reflectors - Dedicated Frame-In Required

Reflector Type	Lumens / Wattage	Color Temp.	Reflector / Flange Finish	Optional Emergency
NC-631 = Open Reflector	L85 = 850lm / 11W	CD = Comfort Dim (2700K-1800K)	BSF = Black / Self Flanged	EMI = Integral emergency test switch
NC-636 = Wall Wash	L12 = 1250lm / 16W		BWSF = Black / White Flange	(Compatible with NC-631 only, must specify on frame-in)
NC-638 = Deco Glass*	L20 = 2000lm / 25W		DBSF = Clear Diffused / Black Flange	
	L30 = 3000lm / 37W		DSF = Clear Diffused / Self Flanged	
			DWSF = Clear Diffused / White Flange	
			HBSF = Haze / Black Flange	
			HSF = Haze / Self Flanged	
			HWSF = Haze / White Flange	
			WSF = White / Self Flanged	
* Deco Glass Option				
NTG-6B/120	Tempered Blue Glass with 4-3/4" Open Center			
NTG-6B/80	Tempered Blue Glass with 3-1/8" Open Center			
NTG-6CF	Tempered Clear Glass with Frosted Center			
NTG-6FC	Tempered Clear Glass with Clear Center			
NTG-6HC	Tempered Clear Glass with Frosted Center and 3-1/8" Open Center			

Example: **NC-631L20CDWSF** = 6" Sapphire I Open Reflector, 2000lm / 25W LED, Comfort Dim (2700K-1800K), White / Self Flange Finish

NCAH-630

6" Sapphire I Comfort Dim New Construction Frame-In

Source: 11W to 37W LED
850lm to 3000lm

Type

Project

Catalog No.

Notes

PRODUCT DESCRIPTION

Architectural grade LED downlights featuring deep cone reflectors. The Sapphire series is available in 4", 6" or 8" apertures and also in new construction or remodel frame-ins.

CONSTRUCTION

Plaster Frame: Architectural quality 0.050 galvanized steel ring riveted to 0.064 steel junction box and driver tray. Plaster frame opening includes (3) "butterfly" spring clips to hold reflector assembly in place.

Mounting: Frame-in includes two adjustable bar hangers and universal brackets that accept flat bar hangers, C-Channel (ordered separately) or rigid 1/2" conduit. Adjustable hanger bars with captive nails, alignment foot, T-Bar slot are included on frame. Frame-in includes an adjustable deep ceiling collar that accommodates ceiling thickness from 1/2" to 2".

Minimum Clearances: Frames require a minimum of 3" from thermal insulation and 1/2" from adjacent building component.

Junction Box: Plaster frame integrated 29 cubic inch 0.064" thick galvanized steel, with seven 1/2" knockouts, four pryouts, and snap on cover. Electrical connections are made through a single junction box door. Green wire provided for installations with ground wire fed through PVC pipe conduit. Junction box connects to reflector assembly with lockable quick connect.

Thermal Protector: External thermal device is located on the junction box.

Driver: Isolated driver separates the primary side from the secondary side.

ELECTRICAL

Input Voltage: 120V or 277V

Operating Temp.: 0°C to 45°C ambient temperature

Lumens / Wattage: L85 = 850lm / 11W; L12 = 1250lm / 16W; L20 = 2000lm / 25W; L30 = 3000lm / 37W

Dimming: ELV or 0-10V dimming, must specify

[Click Here](#) or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab.

COMPATIBLE REFLECTORS

CATALOG NO. DESCRIPTION

NC-631	6" Open Reflector
NC-636	6" Wall Wash Reflector
NC-638	6" Decorative Glass Reflector

Emergency LED Driver (BSL17C-C2)

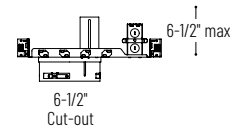
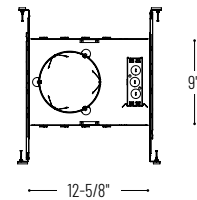
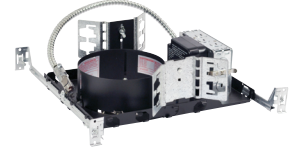
- Up to 7.5W emergency illumination with LEDs.
- Illumination Time: 90min
- Voltage: 120/277 VAC, 60Hz
- Output Voltage: 15.0-50.0 VDC
- Available with remote or integral test switch, must specify

LABELS AND LISTINGS

- cULus Listed for Damp Location (Wet Location when used with compatible reflector)
- [10-Year Limited Warranty](#)
- RoHS Compliant
- Emergency LED Driver meets Title 20 CEC efficiency standards



PRODUCT IMAGES AND DIMENSIONS



6" Sapphire I Comfort Dim New Construction Frame-In - Compatible with Sapphire I Comfort Dim Reflectors

Lumens / Wattage	LED Module	Driver	Emergency
NCAH-630/85 = 850lm / 11W	C = Comfort Dim	LE1 = 120V Input; ELV (850-1250lm) / 0-10V (2000-3000lm)	EM - Emergency Pack w/ Remote Test Switch
NCAH-630/12 = 1250lm / 16W		LE2 = 277V Input; 0-10V dimming	EMI - Emergency Pack w/ Integral Test Switch, must specify on reflector
NCAH-630/20 = 2000lm / 25W		LE4 = 120V Input; ELV (2000-3000lm) / 0-10V (850-1250lm)	
NCAH-630/30 = 3000lm / 37W			

Example: NCAH-630/12CLEIEM = 6" Sapphire I Comfort Dim Universal New Construction Frame-In, 1250lm / 16W, 120V Input, Emergency with Remote Test Switch

NCHR-634

6" Sapphire I Comfort Dim Remodel Frame-In

Source: 11W to 37W LED

850lm to 3000lm

Type

Project

Catalog No.

Notes

PRODUCT DESCRIPTION

Architectural grade LED downlights featuring deep cone reflectors. The Sapphire series is available in 4", 6" or 8" apertures and also in new construction or remodel frame-ins.

CONSTRUCTION

Plaster Frame: Architectural quality 0.050 galvanized steel ring riveted to 0.064 steel junction box and driver tray. Plaster frame opening includes (3) "butterfly" spring clips to hold reflector assembly in place.

Mounting: Designed for installation in existing ceilings. Three high tension tempered steel springs secure remodel housings evenly to the ceiling; hole cutout template provided for convenience. Remodel frame-in accommodates ceiling thickness from 1/2" to 1-1/4".

Minimum Clearances: Frames require a minimum of 3" from thermal insulation and 1/2" from adjacent building component.

Junction Box: Plaster frame integrated 29 cubic inch 0.064" thick galvanized steel, with seven 1/2" knockouts, four pryouts, and snap on cover. Electrical connections are made through a single junction box door. Green wire provided for installations with ground wire fed through PVC pipe conduit. Junction box connects to reflector assembly with lockable quick connect.

Thermal Protector: External thermal device is located on the junction box.

Driver: Isolated driver separates the primary side from the secondary side.

ELECTRICAL

Input Voltage: 120V or 277V

Operating Temp.: 0°C to 45°C ambient temperature

Lumens / Wattage: **L85** = 850lm / 11W; **L12** = 1250lm / 16W; **L20** = 2000lm / 25W; **L30** = 3000lm / 37W

Dimming: ELV or 0-10V dimming, must specify

[Click Here](#) or check complete dimmer list at www.NoraLighting.com in the "Compatibility" page under "Resources" tab.

COMPATIBLE REFLECTORS

CATALOG NO. DESCRIPTION

NC-631	6" Open Reflector
NC-636	6" Wall Wash Reflector
NC-638	6" Decorative Glass Reflector

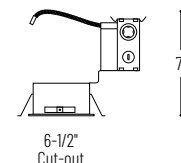
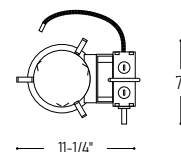
Emergency: Housing can be specified with connections for emergency battery installation. Requires top access. Must specify battery with remote test switch separately, NEPK-BSL17C-C2U.

LABELS AND LISTINGS

- cULus Listed for Damp Location (Wet Location when used with compatible reflector)
- [10-Year Limited Warranty](#)
- RoHS Compliant
- Emergency LED Driver meets Title 20 CEC efficiency standards



PRODUCT IMAGES AND DIMENSIONS



6" Sapphire I Comfort Dim Remodel Frame-In - Compatible with Sapphire I Comfort Dim Reflectors

Lumens / Wattage	LED Module	Driver
NCHR-634/85 = 850lm / 11W	C = Comfort Dim	LE1 = 120V Input; ELV (850-1250lm) / 0-10V (2000-3000lm)
NCHR-634/12 = 1250lm / 16W		LE2 = 277V Input; 0-10V dimming
NCHR-634/20 = 2000lm / 25W		LE4 = 120V Input; ELV (2000-3000lm) / 0-10V (850-1250lm)
NCHR-634/30 = 3000lm / 37W		

Optional Accessories

Description
NEPK-BSL17C-C2U = Remote Emergency Battery w/Test Switch

Example: **NCHR-634/12CLE1** = 6" Sapphire I Remodel Frame-In, 1250lm / 16W, 120V Input

PHOTOMETRICS

6" Sapphire I Comfort Dim Series

Type

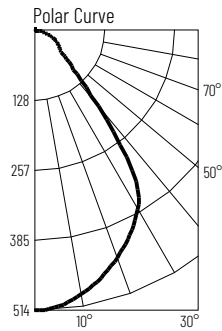
Project

Catalog No.

Notes

Test Information

Test Number: NTR11431
Part Number: NC-631L85CDWSF
Lumens: 769lm
Wattage: 10.74W
Efficacy: 72lpw
CCT / CRI: 2700K / 90 CRI
Beam Spread: 74°
Spacing Criteria (0°-180°): 1.12
Spacing Criteria (90°-270°): 1.12



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	32.1fc	6'-1"
6'	14.3fc	9'-1"
8'	8fc	12'-1"
10'	5.1fc	15'-2"
12'	3.6fc	18'-2"

Zonal Lumen Summary

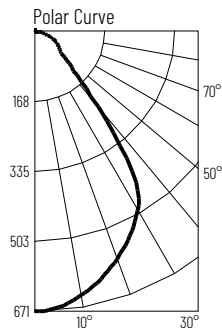
Zone	Lumens	% Luminaire
0-30	371	48.2
0-40	557	72.4
0-60	691	89.8
0-90	764	99.3
90-180	5	0.7
0-180	769	100

Candela Table

Vertical Angles	Candela
0	514
5	508
15	470
25	414
35	313
45	101

Test Information

Test Number: NTR11428
Part Number: NC-631L12CDWSF
Lumens: 984lm
Wattage: 15.53W
Efficacy: 63lpw
CCT / CRI: 2700K / 90 CRI
Beam Spread: 74°
Spacing Criteria (0°-180°): 1.1
Spacing Criteria (90°-270°): 1.1



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	41.9fc	6'
6'	18.6fc	9'
8'	10.5fc	12'
10'	6.7fc	15'
12'	4.7fc	18'

Zonal Lumen Summary

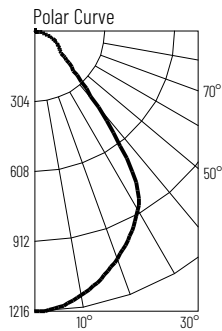
Zone	Lumens	% Luminaire
0-30	480	48.7
0-40	715	72.6
0-60	884	89.8
0-90	977	99.3
90-180	7	0.7
0-180	984	100

Candela Table

Vertical Angles	Candela
0	671
5	663
15	612
25	533
35	393
45	128

Test Information

Test Number: NTR11429
Part Number: NC-631L20CDWSF
Lumens: 1838lm
Wattage: 26.01W
Efficacy: 71lpw
CCT / CRI: 2700K / 90 CRI
Beam Spread: 75°
Spacing Criteria (0°-180°): 1.12
Spacing Criteria (90°-270°): 1.12



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
4'	76fc	6'-1"
6'	33.8fc	9'-1"
8'	19fc	12'-2"
10'	12.2fc	15'-2"
12'	8.5fc	18'-4"

Zonal Lumen Summary

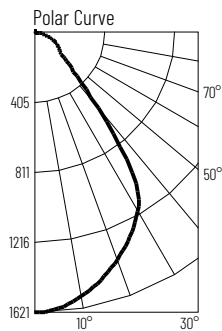
Zone	Lumens	% Luminaire
0-30	876	47.6
0-40	1318	71.7
0-60	1650	89.7
0-90	1823	99.2
90-180	15	0.8
0-180	1838	100

Candela Table

Vertical Angles	Candela
0	1216
5	1205
15	1114
25	976
35	741
45	257

Test Information

Test Number: NTR11430
Part Number: NC-631L30CDWSF
Lumens: 2453lm
Wattage: 36.14W
Efficacy: 68lpw
CCT / CRI: 2700K / 90 CRI
Beam Spread: 75°
Spacing Criteria (0°-180°): 1.12
Spacing Criteria (90°-270°): 1.12



Illuminance at a Distance

Distance from Luminaire	FC at Nadir	Beam Diameter
6'	45fc	9'-1"
9'	20fc	13'-8"
12'	11.3fc	18'-2"
15'	7.2fc	22'-10"
18'	5fc	27'-5"

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1171	47.7
0-40	1760	71.7
0-60	2199	89.6
0-90	2430	99.1
90-180	22.5	0.9
0-180	2453	100

Candela Table

Vertical Angles	Candela
0	1621
5	1606
15	1489
25	1306
35	987
45	341