

Joy to you! Sense of Light NC LED

NC LED

Joy to you! Sense of Light NC LED



Why NC LED?

- Expert LED Module manufacturer
- Stable product quality pass through the strict QC
- Having full production line from DESIGN to PACKAGE
- Continuous Study to save production cost (Automated Facility since 2010)
- Made in Korea
- No.1 market share in Korea
- Competitive price and High-quality products
- Speedier & more flexible response to partner's demand than A big company

CE / UL certified

ISO 9001 : 2008 (Qualified facility)



Joy to you! Sense of Light NC LED

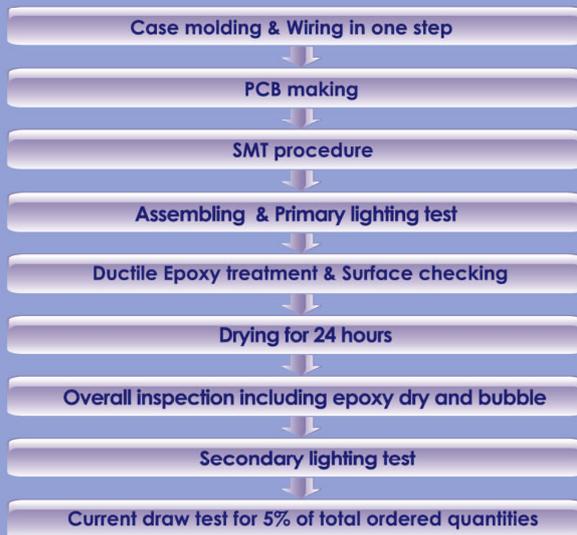
All the products from NC LED are technically developed and intensively tested and inspected!

- ISO9001: 2008 certified Facilities
- Full production line from DESIGN to PACKAGE
- Monthly Capacity : 800,000 pcs
- Automated production line since the year 2010
- OEM production is available for mass quantity order
- Technical competitiveness
 - CE / UL Approved for global marketing
 - 4 Patents pending for "Light diffusion type substrate for a LED module"
 - IP68 for perfect waterproofing



NC LED
NAMYANGJU FACTORY

Production flow with strict QC



Chamber test

- ✓ Thermal Resistance test
- ✓ Low-temperature Resistance test
- ✓ Humidity Resistance test



Test temperature range
for Operation :
-20°C to 70°C

Test humidity range
for operation :
85% on the temperature over 25°C



Automated Facility



ISO 9001 : 2008

• Technologies of NC LED

Joy to you! Sense of Light NC LED

HLC series

Product Features Most Preferred Bestseller LED Module solution

- Constant Current Drive – "Fully warranted Stability" with High energy efficiency
- Constant Luminosity & Current flow to Max. 50 modules in series
- Efficient Heat release with double-sided PCB design
- Reverse current protection • 50,000hours of Long lifetime
- 3chip SMD LED mounted (made in Korea)
- IP68 - Highest level of Water & Dust protection
- CE, UL Approved quality products
- Green products free from any hazardous substances



LED MODULE APPLICATION



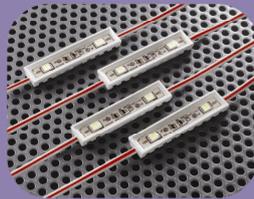
HLC4-W



HLC3-W



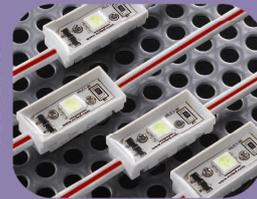
HLC3S-W



HLC2-W



HLC2S-W



HLC1-W



Nationwide SK mobile shops in Korea

Specification

Product No.	HLC4 - W				HLC3 - W				HLC3S - W				HLC2 - W				HLC2S - W				HLC1 - W												
	W	R	B	G AB	W	R	B	G AB	W	R	B	G AB	W	R	B	G AB	W	R	B	G AB	W	R	B	G AB									
Color	DC 12V				DC 12V				DC 12V				DC 12V				DC 12V				DC 12V												
Operating Power	0.96W				0.72W				0.72W				0.48W				0.48W				0.24W												
Power Dissipation	80mA				60mA				60mA				40mA				40mA				20mA												
Current Dissipation	50 modules				50 modules				50 modules				50 modules				50 modules				100 modules												
Max. series connection	96L x 12W x 7H mm				96L x 15W x 7H mm				96L x 15W x 7H mm				66L x 15W x 7H mm				36L x 12W x 7H mm				26L x 12W x 7H mm												
Dimensions	15g				13g				10g				9g				7g				4g												
Weight	120°				120°				120°				120°				120°				120°												
Viewing Angle	22,000	8,400	9,200	14,400	8,400	16,800	6,300	2,400	10,800	6,300	16,800	6,300	2,400	10,800	6,300	11,000	4,200	1,500	7,200	4,200	11,000	4,200	1,500	7,200	4,200	5,500	2,100	800	3,800	2,100			
Luminous Intensity(mcd)	62.4	23.7	9.1	45.7	23.7	46.8	17.8	6.8	32.5	17.8	46.8	17.8	6.8	30.5	17.8	31.2	11.9	4.5	20.3	11.9	31.2	11.9	4.5	20.3	11.9	15.6	5.9	2.3	10.2	5.9			
Luminous Intensity(lumen)	-	625	460	525	-	625	460	525	-	625	460	525	-	625	460	525	-	625	460	525	-	625	460	525	-	625	460	525	-	625	460	525	-
Dominant Wavelength	8,500	-	-	-	8,500	-	-	-	-	8,500	-	-	-	-	8,500	-	-	-	-	8,500	-	-	-	-	8,500	-	-	-	-	8,500			
Color Temperature	Wire to Wire (Series connection)				Wire to Wire (Series connection)				Wire to Wire (Series connection)				Wire to Wire (Series connection)				Wire to Wire (Series connection)				Wire to Wire (Series connection)												
Module connection	Min. 80mm				Min. 80mm				Min. 80mm				Min. 80mm				Min. 80mm				Min. 80mm												
Channel Height	-30°C~60°C				-30°C~60°C				-30°C~60°C				-30°C~60°C				-30°C~60°C				-30°C~60°C												
Operating Temperature	-30°C~10°C				-30°C~10°C				-30°C~10°C				-30°C~10°C				-30°C~10°C				-30°C~10°C												
Storage Temperature	IP68				IP68				IP68				IP68				IP68				IP68												
Waterproofing	#wg18, 1007-SPT-1				#wg18, 1007-SPT-1				#wg18, 1007-SPT-1				#wg18, 1007-SPT-1				#wg18, 1007-SPT-1				#wg18, 1007-SPT-1												
Cable (UL Standard)	ABG + Double Epoxy Treatment				ABG + Double Epoxy Treatment				ABG + Double Epoxy Treatment				ABG + Double Epoxy Treatment				ABG + Double Epoxy Treatment				ABG + Double Epoxy Treatment												
Material																																	

* Specifications subject to change without notice
* All the luminosity data for white color is recorded based on 8500K kelvin.



• HLC series

Joy to you! Sense of Light NC LED

NCP series

Product Features Most Qualified Premium LED Module solution

- Constant Current Drive - "Fully warranted Stability" with High energy efficiency • Nonpolar circuit design for "Easy installation"
- Constant Luminosity & Current flow to Max. 50 modules in series
- Efficient Heat release with double-sided PCB design
- Reverse current protection • 50,000hours of Long lifetime
- 3chip SMD LED mounted (made in Korea)
- IP68 - Highest level of Water & Dust protection
- Green products free from any hazardous substances



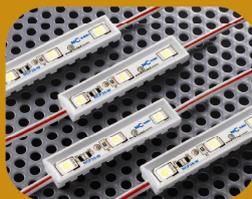
LED MODULE APPLICATION



NCP4-W



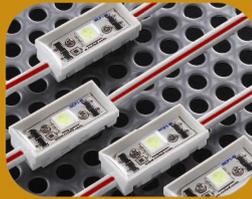
NCP3-W



NCP3S-W



NCP2S-W



NCP1-W

Specification

Product No.	NCP4 -W				NCP3 - W				NCP3S - W				NCP2-W				NCP2S-W				NCP1-W							
	W	R	B	G	W	R	B	G	W	R	B	G	W	R	B	G	W	R	B	G	W	R	B	G	W	R	B	G
Operating Power	DC 12V				DC 12V				DC 12V				DC 12V				DC 12V				DC 12V							
Power Dissipation	1.44W				0.72 W				0.72 W				0.48 W				0.48 W				0.24 W							
Current Dissipation	100mA				60mA				60mA				40mA				40mA				20mA							
Max. series connection	50 modules				50 modules				50 modules				50 modules				50 modules				100 modules							
Dimensions	42L x 45W x 8H mm				96L x 15W x 7H mm				66L x 15W x 7H mm				66L x 15W x 7H mm				36L x 12W x 7H mm				26L x 12W x 7H mm							
Weight	20g				15g				15g				9g				7g				4g							
Viewing Angle	120°				120°				120°				120°				120°				120°							
Luminous Intensity(mcd)	22,000	8,400	3,200	14,400	16,500	6,300	2,400	10,800	16,500	6,300	2,400	10,800	11,200	4,200	1,600	7,200	11,000	4,200	1,600	7,200	5,500	2,100	800	3,800	2,100	800	300	1,400
Luminous Intensity(lumen)	62.4	23.7	9.1	40.7	46.8	17.8	6.8	30.5	46.8	17.8	6.8	30.5	31.2	11.9	4.5	20.3	31.2	11.9	4.5	20.3	15.6	5.9	2.3	10.2	5.9	2.3	0.9	4.1
Dominant Wavelength	-	625	480	525	-	625	460	525	-	625	460	525	-	625	460	525	-	625	480	525	-	625	460	525	-	625	460	525
Color Temperature	8,500				8,500				8,500				8,500				8,500				8,500							
Module connection	Wire to Wire (Series connector)				Wire to Wire (Series connector)				Wire to Wire (Series connector)				Wire to Wire (Series connector)				Wire to Wire (Series connector)				Wire to Wire (Series connector)							
Channel Height	Min. 60mm				Min. 60mm				Min. 60mm				Min. 60mm				Min. 60mm				Min. 60mm							
Operating Temperature	-20°C~60°C				-20°C~60°C				-20°C~60°C				-20°C~60°C				-20°C~60°C				-20°C~60°C							
Storage Temperature	-30°C~70°C				-30°C~70°C				-30°C~70°C				-30°C~70°C				-30°C~70°C				-30°C~70°C							
Waterproofing	IP68				IP68				IP68				IP68				IP68				IP68							
Cable (U.L. Standard)	avg18, 1007-SPT-1				avg18, 1007-SPT-1				avg18, 1007-SPT-1				avg18, 1007-SPT-1				avg18, 1007-SPT-1				avg18, 1007-SPT-1							
Materials	ABS + Ductile Epoxy Treatment				ABS + Ductile Epoxy Treatment				ABS + Ductile Epoxy Treatment				ABS + Ductile Epoxy Treatment				ABS + Ductile Epoxy Treatment				ABS + Ductile Epoxy Treatment							

* Specifications subject to change without notice
* All the luminosity data for white color is recorded based on 8500Kelvin.



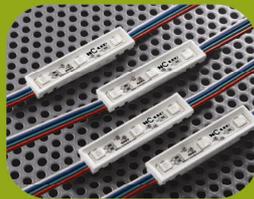
• NCP series

Joy to you! Sense of Light NC LED

RGB series

Full-color Dimming RGB LED Module solution

- 16 Million full color expression
- 3chip-in-1 SMD LED lamp mounted, natural color mixture available
- "Fully warranted Stability" with High energy efficiency
- Constant Current Drive for RGB4
- Efficient Heat release with double-sided PCB design
- Reverse current protection
- 50,000hours of Long lifetime
- IP68 - Highest level of Water & Dust protection
- Green products free from any hazardous substances



RGB3



RGB4



Specification

Product No.	RGB4 Square type	RGB3 Bar type
Operating Supply	DC 12V	DC 12V
Power Dissipation	1.2W	0.72 W
Dissipation Current	100mA	60mA
Max series connection	50 modules	50 modules
Dimensions	48L x 48W x 8H mm	66L x 158W x 7.6H mm
Weight	20g	15g
Viewing Angle	120°	120°
Luminaire Intensity(mcd)	R2400 (G:4000) / B:1200	R:1600 (G:3000) / B:2000
Dominate Wavelength	R:625 (G:525) / B:465	R:625 (G:525) / B:465
Module connection	Wire to Wire (Series connection)	Wire to Wire (Series connection)
Channel Height	Min. 80mm	Min. 80mm
Operating Temperature	-20°C ~ 60°C	-20°C ~ 60°C
Storage Temperature	-30°C ~ 70°C	-30°C ~ 70°C
Waterproofing	IP68 (G:IP68)	IP68 (G:IP68)
Cable (UL Standard)	avg/18, 100T-SPT-1	avg/18, 100T-SPT-1
Materials	ABS + Double Epoxy Treatment	ABS + Double Epoxy Treatment

* Specifications subject to change without notice



CTM-300 RGB Dimming Control System

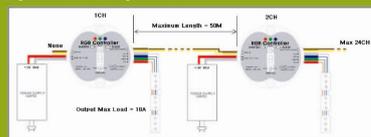


Features

- RGB dimming controller
- 9 possible dimming mode control
- Alternative to MASTER / SLAVE
- Dimming speed control available
- Compact size, Easy installation
- Visible status through LED lamp
- Various display up to 24CH with RS485 communication
- Stop function in the desired color during display
- Slave follows the Master's display mode, select "MODE 0 (Zero)" for Slave



System Composition



Specification

Title	Spec	Unit
OUT PUT	12	DCV
Dissipation Current	50	mA
Dimension	70W * 1.5	mm
Weight	70	g
Operating temperature	-20~+60	°C
Waterproofing	IP67	
Protocol	NC's own Protocol	
Mem Memory	8	Kbyte
Channel	1	CH
Permitted Current limit	1.6	A
Max.Connectable Unit	300	EA

* Specifications subject to change without notice

• RGB Series



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ECO Series

Product Features

- The best solution for the price-sensitive market
- 3 chip SMD LED mounted, Long life LEDs last for years (50,000 hours)
- High luminosity & Compact design
- Slight current drop through wire to wire connection (VS. Soldering)
- Max. 50 modules in series • CE Approved quality product.
- Durable epoxy resin fill for waterproof (IP68) rating
- 120° viewing angle creates more uniform backlighting effects and better silhouettes



Specification

Product No.	ECO4 Square type			ECO3			ECO3S			ECO2			ECO2S			ECO1		
	W	S	R	W	S	R	W	S	R	W	S	R	W	S	R	W	S	R
Operating Power	DC 12V																	
Power Dissipation	1.58W			0.72 W			0.72 W			0.48 W			0.48 W			0.24 W		
Current Consumption	80mA			40mA			40mA			40mA			40mA			20mA		
Max. series connection	50 modules			100 modules														
Dimensions	45L x 15W x 7H mm			96L x 15W x 7H mm			96L x 15W x 7H mm			66L x 15W x 7H mm			38L x 12W x 7H mm			28L x 12W x 7H mm		
Weight	15g			15g			15g			9g			7g			4g		
Viewing Angle	120°			120°			120°			120°			120°			120°		
Luminous Intensity(mcd)	21.00	6.00	1.30	14.00	4.00	0.80	14.00	4.00	0.80	11.00	3.00	0.60	11.00	3.00	0.60	11.00	3.00	0.60
Luminous Intensity(Lumens)	0.4	23.7	5.1	42.7	23.7	48.8	17.8	8.8	30.5	17.8	8.8	30.5	11.9	4.5	20.3	11.9	4.5	20.3
Darkroom Wavelength	650	460	626	650	460	626	650	460	626	650	460	626	650	460	626	650	460	626
Color Temperature	6500	-	-	6500	-	-	6500	-	-	6500	-	-	6500	-	-	6500	-	-
Module connection	Wire to Wire (Series connection)																	
Channel Height	Min. 80mm																	
Operating Temperature	-30°C~80°C																	
Storage Temperature	-30°C~70°C																	
Waterproofing	IP68																	
Cable (UL Standard)	awg18, 1007-SPT-1(105°C)																	
Materials	ABS + Ductile Epoxy Treatment																	

* Specifications subject to change without notice



AC Series



AC2-W



AC4-W



Product Features

- AC Power operated LED Module solution
 - Convenient usability with Direct AC Power 100V / 220V
 - No extra converter, No extra expenses
 - "Safety Fuse built-in" to prevent a Fire incidents
 - Constant Current Drive - "Fully warranted Stability" with High energy efficiency (58 lm/w)
 - Efficient Heat release with double-sided PCB design
 - Constant Luminosity & Current flow to Max. 300 modules in series
 - Reverse current protection
 - 50,000hours of Long lifetime
 - 3chip SMD LED mounted (made in Korea)
- IP68 - Highest level of Water & Dust protection
 - Green products free from any hazardous substances

Specification

Product No.	AC2-W	AC4-W
Dimension(mm)	66Lx19Wx11H	45Lx45Wx11H
Operating Power	100V / 220V	100V / 220V
Current Consumption	6 mA	9.2 mA
Power Consumption	0.6 W	0.92 W
Color Temperature	3000/5000/8000 K	3000/5000/8000 K
Weight(g)	16	22
Luminous flux(lm)	28	54
Radiation Angle	120°	
Operating Temperature	-20°C~80°C	
Storage Temperature	-30°C~70°C	
Waterproofing	IP68	
Cable	awg18, 1007-SPT-1(105°C)	
Case Material	ABS + Ductile Epoxy Treatment	

* This is the standard specification above. Specifications subject to change without notice.
 * All the luminosity data for white color is recorded based on 8500Kelvin.
 * Red, Green, Blue colors are available



• ECO Module / • AC Module

Joy to you! Sense of Light NC LED

LED Bar-type Aluminum Module

Application

- Showcase lighting
- Indirect lighting for versatile application
- Interior lighting
- Billboard lighting



Common Specifications

Operating Power : DC 24V
 LED Source : 3 chip SMD LED
 Color temperature of white : 5500K / 4500K / 8500K
 Warm white will be available from 3000K



Physical & Optical Specification

Product No.	NCAL BAR-2	NCAL BAR-3S	NCAL BAR-6	NCAL BAR-12	NCAL BAR-24
Dimension[Bar]	7.2T*15W*88L	7.2T*15W*68L	7.2T*15W*250L	7.2T*15W*490L	7.2T*15W*970L
Number of LED lamps	2 LED	3 LED	6 LED	12 LED	24 LED
Power Dissipation	0.48W	0.72W	1.44W	2.88W	5.76W
Weight	15g	15g	41g	73g	134g
Luminous flux(lumen)	31.2	46.8	93.6	187.2	374.4
Max. series connection	50 modules	50 modules	50 modules	30 modules	15 modules

* This is the standard specification above. Specifications subject to change without notice

LED STICK / LED ALUMINUM STICK



LED ALUMINUM STICK

Product Features

- The Best choice for Illumination with Cost-effective solution
- "Fully warranted Stability" with High energy efficiency
- Efficient Heat release with double-sided PCB design
- Reverse current protection
- 50,000hours of Long lifetime
- 54°50/ 35°28 SMD LED all Available depends on order
- Green products free from any hazardous substances

Physical & Optical Specification

Product No.	LED STICK 7.2W	LED AL STICK 7.2W
Dimension	6W*500L*1T	10W*500L*6T
Mounted LED	3chip SMD LED 3D LED per 500mm	3chip SMD LED 3D LED per 500mm
Operating Power	DC12/24V	DC12/24V
Power Consumption	7.2W	7.2W
Luminous Intensity(lumen)	468 lm	468 lm
Structure	PCB board with Lamp only	Aluminium body with the same size of PCB
Color Temperature	3000/5500/6500/8500K	3000/5500/6500/8500K
Weight	8g	60g
Radiation Angle	120°	120°
Cutting pitch	3 lamps per unit, 500/600mm = 10 pieces	Fixed with Aluminum case
Waterproofing	NA	IP67
Cable (UL Standard)	AWG 18	AWG 18
Operating Temp.	-20 ~ +40°C	-20 ~ +40°C

* This is the standard specification above. Specifications subject to change without notice
 * Red, Green, Blue, RGB Stick also available on demands

Application

- Side-lighting for light box or panel
- Restaurant Interior lighting
- Shelf illumination for shops
- Showcase lighting
- Art & Structure lighting for Architecture



LED STICK

• Aluminum modules / • LED Stick

Joy to you! Sense of Light NC LED

LUXENCE LED TUBE



Specification

Product No.	LUXENCE-LED TUBE-22W	LUXENCE-LED TUBE-25W
Dimension (mm)	ø29 diameter * 1198 length (1212 including pin)	
Operating Power	SMPS TYPE (Output Voltage : 37.5V)	
LED Source	5450 3Chip SMD, 5500Kelvin, 50000hours life time	
Power Consumption (W)	22	25
Output Current (A)	0.52	0.57
CRIRa)	70 / 80	70 / 80
Total Luminous flux (lm)	1950 / 1810	2220 / 2050
Lumen per Watt	80 / 74	80 / 74
Radiation Angle	120°	120°
Waterproofing	IP65	IP65
Operating Temp.	-20 ~ +40°C	-20 ~ +40°C
Materials	Aluminium+Poly Carbonate	Aluminium+Poly Carbonate
Weight (g)	350	350

* Specifications subject to change without notice

The Best substitute for Fluorescent lamp

- Green solutions with eco-friendly LEDs
- DC Operated products through SMPS for its best stability, safety
- Energy saving solution with 87% High efficiency rate
- Remarkable Electricity & Maintenance cost reduction
- Gorgeous color and Light diffusion
- Excellent heat release through Aluminum body & specialized circuit design
- 70, 80 CRI. Colors are available for customers preference
- Reverse current protection



LUXENCE CANOPY Series

Specialized Patrol station Lighting

- Up to 70% Energy Saving effect with Green LED
- Easy maintenance with long life span lighting
- Efficient Heat release with Aluminum body and specialized PCB design
- Reverse current protection

The Best substitute for Fluorescent lamp

- Green solutions with eco-friendly LEDs
- High efficient Energy savings up to 75%
- Power supply unit Included
- Remarkable Electricity & Maintenance cost reduction
- The best substitute for Metal halide lamps
- Versatile application for high ceiling lighting

Application

- Patrol station ceiling lights
- Warehouse chain-store ceiling lights
- Factory ceiling lights
- Tunnel Lights
- Any other places where need lights on the high ceilings



Specification

Product No.	LUXENCE-CA01-60W	LUXENCE-CA01-70W	LUXENCE-CA01-100W
Dimension (mm)	296W*278L*114T	296W*278L*114T	296W*388L*114T
LED Source	SMD 3Chip*324pkg	SMD 3Chip*400pkg	SMD 3Chip*500pkg
Operating Power	INPUT : 100-250VAC / 50.60Hz OUTPUT : 50-70DC 1A	INPUT : 100-250VAC / 50.60Hz OUTPUT : 50-70DC 1A	INPUT : 100-250VAC / 50.60Hz OUTPUT : 50-70DC 1A
LED Power Consumption (W)	62.0	62.0	88.0
Power Consumption (W)	60	70	100
Materials	Aluminium	Aluminium	Aluminium
Color Temp.	5000-6000 K	5000-6000 K	5000-6000 K
CRIRa)	70	70	70
Weight (kg)	4.3	4.3	4.6
Radiation Angle	110°	110°	110°
Waterproofing	IP65	IP65	IP65
Operating Temp.	-20 ~ +40°C	-20 ~ +40°C	-20 ~ +40°C
w / lm	79	81	81
Total Luminous flux (lm)	4650	5570	8100
Life Time (h)	50000	50000	50000

* Specifications subject to change without notice

* This products are contained SMPS itself. Do not need an extra power supply



• LED Tube & Canopy Lighting

Joy to you! Sense of Light NC LED

SMPS

Constant Voltage Power Supplies

- Aluminum exterior case to release heat effective.
- Anodized aluminum exterior case for good looking, long life and anti-ultraviolet rays.
- IP67 for Waterproofing.
- PFC circuit for 95% power factor and more than 85% Utility.

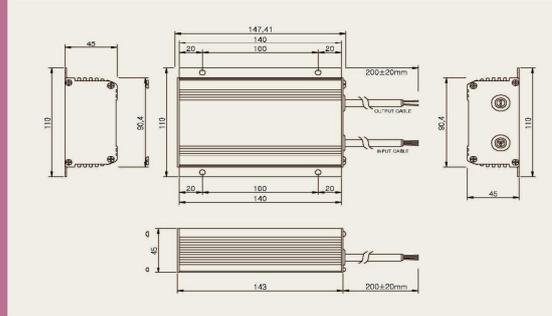
75W / 100W



FEATURES

- 88% High Efficiency
- IP67 Waterproof
- Active PFC (Typical 0.99)
- OVP, SCP
- -20 to 50°C deg operation
- Wide Input 100~240VAC
- EN61347-1, -2-13 compliant

DIMENSIONS



Product No.	Input Current	Input Voltage	Output Voltage	OVP Max	Efficiency
NCP100-AU-12SS-CV	16.7A	100~240VAC	12VDC	18V	90.0%
NCP100-AU-24SS-CV	8.3A	100~240VAC	24VDC	32V	91.0%
NCP75-AU-12SS-CV	12.5A	100~240VAC	12VDC	18V	90.0%
NCP75-AU-24SS-CV	6.3A	100~240VAC	24VDC	32V	91.0%

The constant voltage LED power supplies from NC LED can deliver up to 75W, 100W of output power in a compact package size.

The LUXENCE Power Supply Series provide a range of output voltage solutions for specific LED requirements. With its 90% high efficiency and PFC function, LUXENCE power Supply Series make you experience the high reliability and performance to maximize efficiency of industry as an outstanding solution.

LUXENCE Power Supply Series

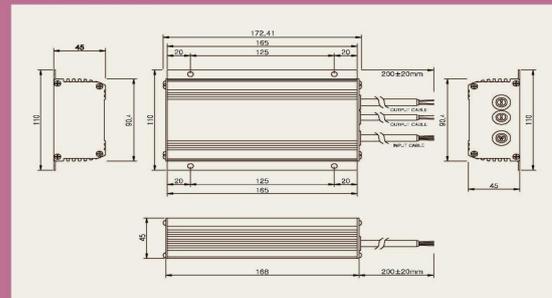
150W / 200W



FEATURES

- 90% High Efficiency
- IP67 Waterproof
- Active PFC (Typical 0.99)
- OVP, SCP
- -20 to 50°C deg operation
- Wide Input 100~240VAC
- EN61347-1, -2-13 compliant

DIMENSIONS



Product No.	Input Current	Input Voltage	Output Voltage	OVP Max	Efficiency
NCP200-AU-12SS-CV	16.7A	100~240VAC	12VDC	18V	90.0%
NCP200-AU-24SS-CV	8.3A	100~240VAC	24VDC	32V	91.0%
NCP150-AU-12SS-CV	12.5A	100~240VAC	12VDC	18V	90.0%
NCP150-AU-24SS-CV	6.3A	100~240VAC	24VDC	32V	91.0%

The constant voltage LED power supplies from NC LED can deliver up to 150W, 200W of output power in a compact package size.

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