MINI 1200 RECESSED

E9I199-

base number

Color Lens Temperature Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini
Subseries: Mini 1200
Brand: Platek
Division: Exterior
Mounting Type: Recessed
Mounting Location: In-Ground

Subcategory: Drive Over **PHYSICAL** Shape: Round Diameter (mm): 140 Diameter (in): 5 1/2 Depth (mm): 80 Depth (in): 3 1/8 Light Distribution: Direct Weight (kg): 1.1 Weight (lbs): 2.43 Load Resistance (kg): 2500 Load Resistance (lbs): 5511 Installation Requirement: Installation with L9A08800 sleeve set in concrete requires a 20-30cm / 8-12" gravel drain bed Diffuser: Clear tempered glass Fixture Finish: BLK

Cable Details: Supplied with 1 power cable 1m in length **ELECTRICAL**

Lamp Type: LED
Input Wattage (W): 10.5

Total Output Wattage (W): 9

Fixture Material: Aluminum Die Cast

Dimming: Non-Dimming / Phase Dimming (120Vac only) / 0-10V

Dimming

Driver Included: No

Driver Location: Remote

Driver Type: Constant Current - 120 /277Vac

Driver Class: Class 2

Input Voltage (V): 120 - 277

Constant Current (MA): 500

LED

Number of LEDs: 6

Color Temperature (°K): 3000 / 4000

Max. Delivered Lumen (lm): 775 - 955 / 805 - 995

Nominal Lumen (lm): 1140 / 1200

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optic°: 9 / 28 / 44

Adjustability: Tilt ±5°

RATINGS AND CERTIFICATIONS

Certified By: Certified for North American Standards

IP rating: IP68
IK Rating: IK10

Bug Rating: B0 U4 G0

PROJECT

TYPE

SPECIFIER

QUANTITY

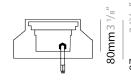
DATE



140mm 5 1/2"

85mm 3 3/8"

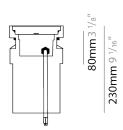




140mm 5 1/2"

85mm 3 3/8"



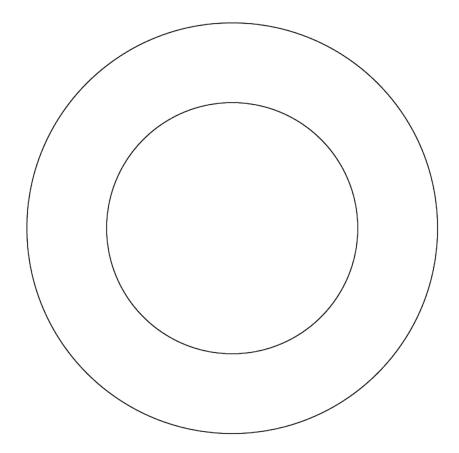






MINI 1200 RECESSED

E9I199-







E91254-

base number Color

Color Lens Temperature Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini

Subseries: Mini SS - Drive Over

Brand: Platek

Division: Exterior

Mounting Type: Recessed

Mounting Location: In-Ground

Subcategory: Drive Over

PHYSICAL

Shape: Round

Diameter (mm): 152

Diameter (in): 6

Depth (mm): 80

Depth (in): 3 1/8

Light Distribution: Uplight

Weight (kg): 1.5

Weight (lbs): 3.3

Load Resistance (kg): 2500

Load Resistance (lbs): 5511

Installation Requirement: Installation with L9A08800 sleeve set in

concrete requires a 20-30 cm gravel drain bed

Screws: A4 stainless steel

Diffuser: Clear tempered glass

Fixture Finish: SST

Fixture Material: Aluminum Die Cast

Cable Details: Supplied with 1 power cable 1m in length

ELECTRICAL

Lamp Type: LED

Input Wattage (W): 10.5

Total Output Wattage (W): 9

Dimming: Tri-Mode (Non-Dimming and Phase Dimming (120Vac only)

and 0-10V Dimming)

Driver Included: No

Driver Location: Remote

Driver Type: Constant Voltage - 120 / 277Vac

Driver Class: Class 2

Input Voltage (V): 120 - 277

Constant Current (MA): 500

LED

Number of LEDs: 6

Color Temperature (°K): 3000 / 4000

Max. Delivered Lumen (lm): 775 - 955 / 805 - 995

Nominal Lumen (lm): 1140 / 1200

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optic°: 9 / 28 / 44

Adjustability: Tilt ±5°

RATINGS AND CERTIFICATIONS

Certified By: Certified for North American Standards

IP rating: IP68

IK Rating: IK10

Bug Rating: B0 U4 G0

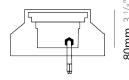
PROJECT
TYPE
SPECIFIER
QUANTITY
DATE



140mm 5 1/2"

85mm 3 3/8'



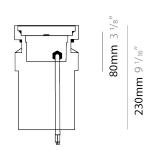




140mm 5 1/2"

85mm 3 3/8"



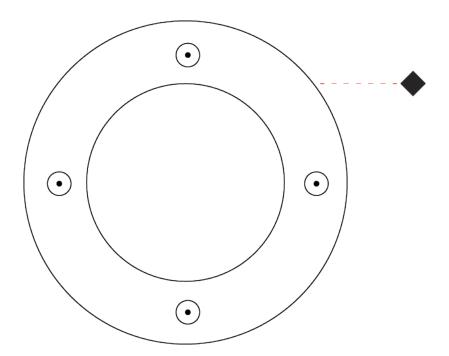




Page 3/20



E9I254-







MINI ROLL OVER 1 OPENING RECESSED

E91330-

base number

Temperature Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini

Subseries: Mini Roll Over 1 Opening

Brand: Platek

Division: Exterior

Mounting Type: Recessed Mounting Location: In-Ground

Subcategory: Marker

PHYSICAL

Shape: Round

Diameter (mm): 145

Diameter (in): 5 11/16

Height (mm): 118

Height (in): 4 1/8

Light Distribution: Direct

Weight (kg): 1.6

Weight (lbs): 3.53

Load Resistance (kg): 2000 Load Resistance (lbs): 4400

Diffuser: Clear tempered glass

Fixture Finish: BLK / WHI / GRY / COR / ANT / BRZ Fixture Material: Aluminum Die Cast

ELECTRICAL

Lamp Type: LED

Input Wattage (W): 2.5

Total Output Wattage (W): 1.5

Dimming: Non-Dimmable

Driver Included: Yes

Driver Location: Integrated Driver Type: Constant Current - 120Vac

Driver Class: Class 2

Input Voltage (V): 120 - 277

Constant Current (MA): 500

Upon Request: Dimming requires a minimum of 4 fixtures per power supply (See components [IP65 or higher enclosure to be supplied by others]) Remote: 0-10Vdc dimming / Phase dimming @120Vac / Non-

dimming 120/277Vac LED

Color Temperature (°K): 2700 / 3000 / 4000

Max. Delivered Lumen (lm): 55 / 60

Nominal Lumen (lm): 190 / 200

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optic°: 1 Opening

Beam Angle: 90

RATINGS AND CERTIFICATIONS

Certified By: Certified for North American Standards

IP rating: IP68

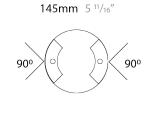
IK Rating: IK10

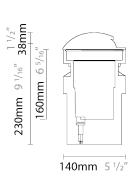
Bug Rating: B0 U2 G1

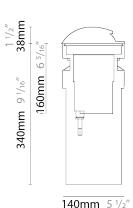


PROJECT TYPE SPECIFIER

QUANTITY DATE









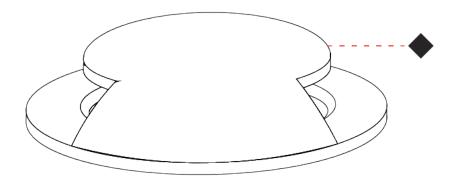
Page 5/20



MINI ROLL OVER 1 OPENING RECESSED

E9I330-

PROJECT	
TYPE	_
SPECIFIER	_
QUANTITY	_
DATE	







MINI ROLL OVER 2 OPENING RECESSED

E91333-

base number Color

Color Finis Temperature Opti

	Finish	
re	Options	

- 1.To build a product code in our configurator select the specify button on the base model # product page
- 2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series:	Mini
ociics.	1411111

Subseries: Mini Roll Over 2 Opening

Brand: Platek

Division: Exterior
Mounting Type: Recessed

Mounting Location: In-Ground

Subcategory: Marker

PHYSICAL

Shape: Round

Diameter (mm): 145

Diameter (in): 5 11/16

Height (mm): 118

Height (in): 4 1/8

Light Distribution: Direct

Weight (kg): 1.8

Weight (lbs): 4

Load Resistance (kg): 2000

Load Resistance (lbs): 4400

Diffuser: Clear tempered glass

Fixture Finish: BLK / WHI / GRY / COR / ANT / BRZ

Fixture Material: Aluminum Die Cast

ELECTRICAL

Lamp Type: LED

Input Wattage (W): 4.2

Total Output Wattage (W): 3

Dimming: Non-Dimmable

Driver Included: Yes
Driver Location: Integrated

Driver Type: Constant Current - 120Vac

Driver Class: Class 2

Input Voltage (V): 120 - 277

Constant Current (MA): 350

Upon Request: (Not included - see components [IP65 or higher enclosure to be supplied by others]) Remote: 0-10Vdc dimming / Phase

dimming @120Vac / Non-dimming 120/277Vac

LED

Color Temperature (°K): 3000 / 4000

Max. Delivered Lumen (lm): 110 / 115

Nominal Lumen (lm): 380 / 400

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optic°: 2 Openings

Beam Angle: 2 x 90

RATINGS AND CERTIFICATIONS

Certified By: Certified for North American Standards

IP rating: IP68

IK Rating: IK10
Bug Rating: B0 U2 G1

TYPE

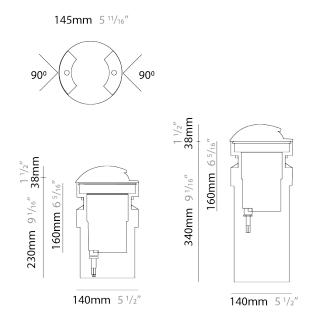
SPECIFIER

QUANTITY

DATE

PROJECT





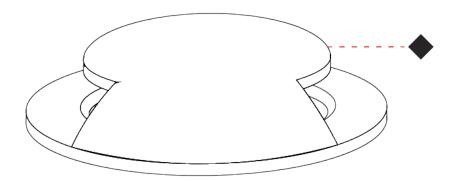




MINI ROLL OVER 2 OPENING RECESSED

E9I333-

PROJECT	
ТУРЕ	
SPECIFIER	
QUANTITY	
DATE	







MINI ROLL OVER 4 OPENING RECESSED

E91336-

base number

Color Finish Temperature Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini

Subseries: Mini Roll Over 4 Opening

Brand: Platek

Division: Exterior
Mounting Type: Recessed

Mounting Location: In-Ground

Subcategory: Marker

PHYSICAL

Shape: Round

Diameter (mm): 145

Diameter (in): 5 11/16

Height (mm): 118

Height (in): 4 1/8

Light Distribution: Direct

Weight (kg): 1.8

Weight (lbs): 4

Load Resistance (kg): 2000

Load Resistance (lbs): 4400

Diffuser: Clear tempered glass

Fixture Finish: BLK / WHI / GRY / COR / ANT / BRZ

Fixture Material: Aluminum Die Cast

ELECTRICAL

Lamp Type: LED

Input Wattage (W): 7.4

Total Output Wattage (W): 6

Dimming: Non-Dimmable

Driver Included: Yes

Driver Location: Integrated

Driver Type: Constant Current - 120 / 277Vac

Driver Class: Class 2

Input Voltage (V): 120 - 277

Constant Current (MA): 500

Upon Request: Remote: 0-10Vdc dimming / Phase dimming (-30°C or

-40°C) / Non-dimming 120/277Vac (-30°C)

LED

Color Temperature (°K): 3000 / 4000

Max. Delivered Lumen (lm): 215 / 225

Nominal Lumen (lm): 760 / 800

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optic°: 4 Openings

Beam Angle: 60

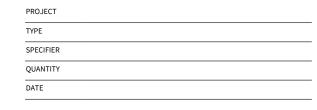
RATINGS AND CERTIFICATIONS

Certified By: Certified for North American Standards

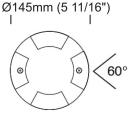
IP rating: IP68

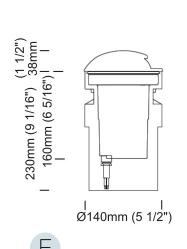
IK Rating: IK10

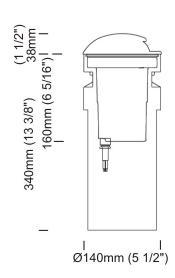
Bug Rating: B0 U3 G1













MINI ROLL OVER 4 OPENING RECESSED

E9I336-

PROJECT TYPE SPECIFIER QUANTITY DATE

Finish chart

01 - Black

Available upon request

02 - White

06 - Gray

07 - Corten

08 - Anthracite 09 - Bronze

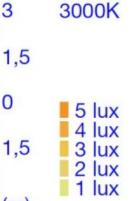


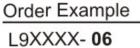
3

0

(m)

1,5











MINI FULL INOX RECESSED

E91576-

base number Color

Temperature Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini

Subseries: Mini Full Inox

Brand: Platek

Division: Exterior

Mounting Type: Recessed Mounting Location: In-Ground

Subcategory: Drive Over

PHYSICAL

Shape: Round

Diameter (mm): 152

Diameter (in): 6

Height (mm): 80

Height (in): 3 1/8

Light Distribution: Uplight

Load Resistance (kg): 2000

Load Resistance (lbs): 4409

Installation Requirement: Installation in sleeve set in concrete with a 20-30 cm gravel drain bed

Screws: A4 stainless steel

Diffuser: Clear tempered glass

Fixture Finish: SST

Fixture Material: Stainless Steel

Cable Details: Supplied with 1 power cable 0.5m in length

ELECTRICAL

Lamp Type: LED

Input Wattage (W): 11

Total Output Wattage (W): 10

Driver Included: No

Driver Location: Remote

Driver Type: Constant Voltage - Universal

Housing: (Not included - see components) L9A08800 allows for external

driver (non-dimming - 120 / 277Vac) / L

Input Voltage (V): 120 - 277

Output Voltage (V): 24

Upon Request: (Not included - see components [IP65 or higher enclosure to be supplied by others]) 0-10Vdc dimming / Phase dimming

/ Non-dimming 120/277Vac

LED

Number of LEDs: 6

Color Temperature (°K): 3000 / 4000

Max. Delivered Lumen (lm): 960 / 995

Nominal Lumen (lm): 1140 / 1200

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optico: 9 / 28 / 44 / ASY; RGBW - 9 / 28 / 44

RATINGS AND CERTIFICATIONS

Certified By: Certified for North American Standards

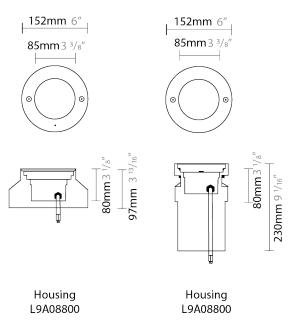
IP rating: IP68

IK Rating: IK10

Bug Rating: B0 U4 G0

Marine Grade: Stainless Steel AISI 316L









MINI FULL INOX RECESSED

E9I576-

PROJECT			
TYPE			
SPECIFIER			
QUANTITY			
DATE			





MINI FULL INOX RECESSED

E9I582-

base number Color

Color Lens Temperature Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini

Subseries: Mini Full Inox

Brand: Platek

Division: Exterior
Mounting Type: Recessed

Mounting Location: In-Ground

Subcategory: Drive Over

PHYSICAL

Shape: Round

Diameter (mm): 152

Diameter (in): 6

Height (mm): 80

Height (in): 3 1/8

Light Distribution: Uplight

Load Resistance (kg): 2500

Load Resistance (lbs): 5511

Installation Requirement: Installation in sleeve set in concrete with a 20-30 cm gravel drain bed

Screws: A4 stainless steel

Diffuser: Extra Clear Flat Tempered Glass - 15mm / 15/32"

Fixture Finish: SST

Fixture Material: Stainless Steel

Cable Details: Supplied with 1 power cable 0.5m in length

ELECTRICAL

Lamp Type: LED

Input Wattage (W): 10

Total Output Wattage (W): 8.4

Driver Included: No

Driver Location: Remote

Driver Type: Constant Current - 120 / 277Vac

Driver Class: Class 2

Input Voltage (V): 120 - 277

Constant Current (MA): 500

Upon Request: (Not included - see components [IP68 or higher enclosure to be supplied by others]) 0-10Vdc dimming / Phase dimming

120Vac only / Non-dimming

LED

Number of LEDs: 6

Color Temperature (°K): 3000 / 4000

Max. Delivered Lumen (lm): 775 - 906 / 805 -995

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optic°: 9 / 28 / 44

Beam Angle: Asymmetrical

RATINGS AND CERTIFICATIONS

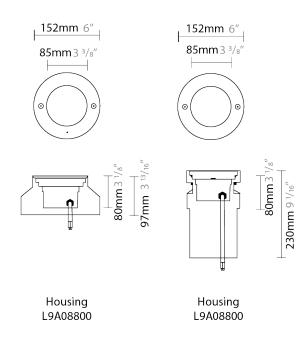
Certified By: Certified for North American Standards

IP rating: IP68

IK Rating: IK10

Bug Rating: B0 U4 G0



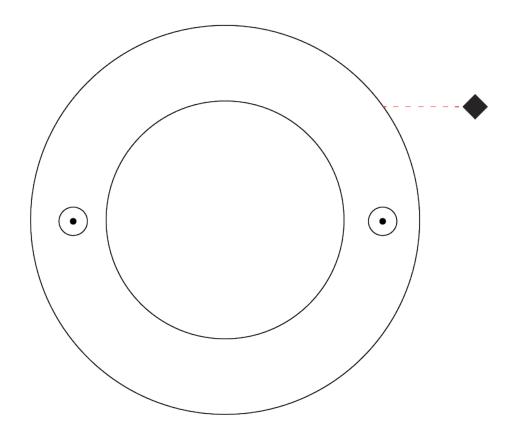






MINI FULL INOX RECESSED

E9I582-







E91619-

base number Color

Temperature Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini

Subseries: Mini SS - Drive Over

Brand: Platek

Division: Exterior

Mounting Type: Recessed

Mounting Location: In-Ground

Subcategory: Drive Over

PHYSICAL

Shape: Round

Diameter (mm): 152

Diameter (in): 6

Depth (mm): 80

Depth (in): 3 1/8

Light Distribution: Uplight

Load Resistance (kg): 2500

Load Resistance (lbs): 5511

Installation Requirement: Installation in sleeve set in concrete with a 20-30 cm gravel drain bed

Screws: A4 stainless steel

Diffuser: Extra Clear Flat Tempered Glass - 15mm

Fixture Finish: SST

Fixture Material: Aluminum Die Cast

Cable Details: Supplied with 1 power cable 1.5m in length

ELECTRICAL

Lamp Type: LED

Input Wattage (W): 11

Total Output Wattage (W): 10 / 11.5 (RGBW)

Dimming: 0-10V Dimming / Phase Dimming (120Vac Only) / DMX (RGBW)

Control Gear: DMX

Driver Included: No

Driver Location: Remote

Driver Type: White LED - Constant Voltage - 120 / 277Vac

Driver Class: Class 2

Housing: (Not included - see components) L9A08800 allows for external

driver (non-dimming - 120 / 277Vac) / L

Input Voltage (V): 120 - 277

Output Voltage (V): 24 Constant Current (MA): RGBW 500

LED

Number of LEDs: 6 / RGBW 8

Color Temperature (°K): 3000 / 4000 / RGBW

Max. Delivered Lumen (lm): 955 / 995

Nominal Lumen (lm): 1140 / 1200

CRI: >80 CRI

Lamp Life (hrs): 60000

OPTICAL

Optic°: 9 / 28 / 44 / Asymmetrical

RATINGS AND CERTIFICATIONS

Certified By: Certified for North American Standards

IP rating: IP68

IK Rating: IK10

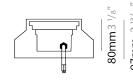
PROJECT TYPE SPECIFIER QUANTITY DATE



140mm 5 1/2"

85mm 3 3/8"

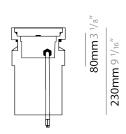




140mm 5 1/2'

85mm 3 3/8"

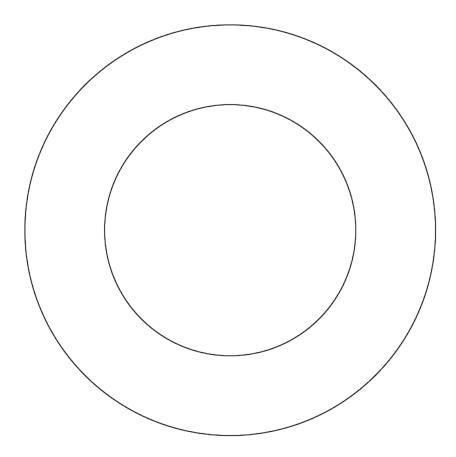








E9I619-





MINI FULL INOX RECESSED

E91633-

base number

Options

1.To build a product code in our configurator select the specify button on the base model # product page

2. To build a manual product code on this datasheet choose from the options listed below in blue font and add the suffix to the base model #

GENERAL

Series: Mini	
Subseries: Mini Full Inox	
Brand: Platek	
Division: Exterior	

Mounting Type: Recessed Mounting Location: In-Ground

Subcategory: Drive Over

	PHYSICAL
	Shape: Round
	Diameter (mm): 152
	Diameter (in): 6
	Height (mm): 80
	Height (in): 3 1/8
	Light Distribution: Uplight
	Load Resistance (kg): 2500
	Load Resistance (lbs): 5511

Installation Requirement: Installation in sleeve set in concrete with a 20-30 cm gravel drain bed

Screws: A4 stainless steel

Diffuser: Extra Clear Flat Tempered Glass - 15mm / 15/32"

Fixture Finish: SST

Fixture Material: Stainless Steel

Cable Details: Supplied with 1 power cable 0.5m in length

ELECTRICAL

Lamp Type: LED

Total Output Wattage (W): 11.5

Dimming: Bluetooth technology or DMX

Control Gear: DMX

Driver Included: No

Driver Location: Remote

Driver Type: Constant Current - Universal

Input Voltage (V): 120 - 277

Constant Current (MA): 500

LED

Number of LEDs: 8

Color Temperature (°K): RGBW

CRI: >80 CRI

Lamp Life (hrs): 60000

Special LEDs offerings: RGBW

OPTICAL

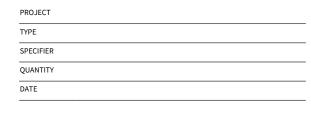
Optic°: 9 / 28 / 44

RATINGS AND CERTIFICATIONS

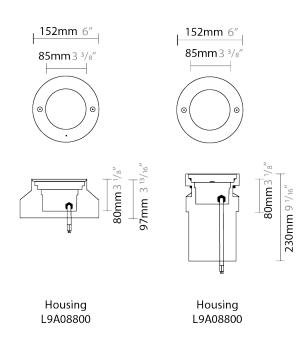
Certified By: Certified for North American Standards

IP rating: IP68

IK Rating: IK10





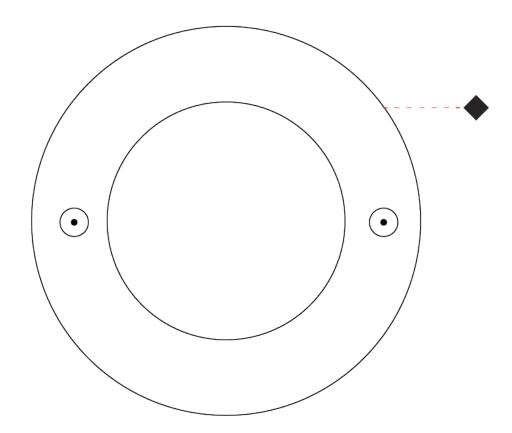






MINI FULL INOX RECESSED

E9I633-







MINI

PROJECT
TYPE
SPECIFIER
QUANTITY
DATE

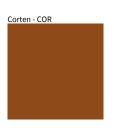
Fixture Finish

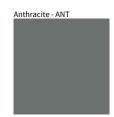














Digital: Not all screens are calibrated the same, and therefore, colors will appear differently between screens. **Physical:** When texture is involved, there will be variations in color, character and tone within a product series and between product families.





MINI

	PROJECT
	TYPE
	SPECIFIER
	QUANTITY
	DATE

LEGEND

<u></u>	floor-mounted	¥	pivotable	⊛	special LED (upon request) RGB, RGBW, tunable, gold+, meat+, art+, fashion+
7	wall and ceiling: recessed and surface mounted	S	rotating	0	warm dim / natural dimming LED
\uparrow	ceiling-mounted and wall-mounted	¥	illuminate tilted	0	rechargeable battery powered
\rightarrow	wall-mounted	I	color of suspension cable	in the second	fixture with natural vivid LED (upon request)
Y	omni-directional light distribution		length of suspension cable	CRI	color rendering index
À	direct light distribution		reflector degree selection	(K)	color temperature
X	direct/indirect light distribution	s s	super spot	LM	lumen (luminous flux)
Y	indirect light distribution	*	lens	₩	efficacy (lumens per watt)
	asymmetric light distribution	8	lens pack	UGR	Unified Glare Rating (UGR) range from 5-40
X	aura light distribution	0	shine ring	*	marine grade (AISI 316 stainless steel)
R	round wall or ceiling cut-out	0	integrated shine ring with diffuser	30	walk on
\Box	square wall or ceiling cut-out	Ċ	free individual colors 01-29	②	drive on
£	the supplied jig specifies the cutout dimensions	<u>c</u>	individual colors: 00 (free of charge), 01-25 (extra charge)	DSC	Dark Sky Compliance
d •+D	minimum distance (meters) lamp - object	♦	luminaire part to be colored (F1)	Ġ	Americans with Disabilities Act (less than 4" off the wall located between 27"-84" from floor)
\pm	recessed depth		luminaire part to be colored (F2)		lamp protected against explosion
<u></u>	ceiling thickness in mm		luminaire part to be colored (F3)	4	blown glass using traditional methods by master glass blower
1	ceiling thickness selection		luminaire part to be colored (F4)	● ®	acoustic material
	dimmable DP (phase), DV (0-10V), DD (dali), DS (step-dim)		luminaire part to be colored (F5)		protection class I, protection insulation
Civaco	included or excluded LED driver/transformer/ control gear	•	color of 3-circuit adaptor		protection class II, protection insulation
8	separately switchable	\odot	indirect diffuser		ETL Certified to UL and CSA Standards
9	sensor	0	direct diffuser	c (ՄL) us	UL Certified to UL and CSA Standards
	remote control	0	ball-proof (upon request)	(II)	CSA Certified to UL and CSA Standards
9	available upon request	9	accessory	(Z)	Certified for North American Standards

IP RATING

IP20	protected against ingress of solid bodies greater than 12.5mm (finger)
IP33	protected against ingress of solid bodies greater than 2.5mm protected against sprays of water up to 60 degrees from the vertical (rain)
IP40	protected against ingress of solid bodies greater than 1mm (wire) no protection against the ingress of moisture
IP43	protected against ingress of solid bodies greater than 1mm (wire) protected against sprays of water up to 60 degrees from the vertical (rain)
IP44	protected against ingress of solid bodies greater than 1mm (wire) protected against water splashed from all directions
IP54	protected against limited ingress of dust (wet rooms/covered outdoor areas) protected against water splashed from all directions
IP65	protected against ingress of dust protected against jets of water
IP66	protected against ingress of dust protected against powerful jets of water or heavy seas
IP67	protected against ingress of dust protected against immersion of water between 15cm - 1m for 30 minutes
IP68	protected against ingress of dust protected against immersion of water under pressure for long periods

IK RATING

IK02	protected against 0.2 joules impact (equivalent to 0.25kg mass dropped from 80mm above the surface)
ІКОЗ	protected against 0.35 joules impact (equivalent to 0.25kg mass dropped from 140mm above the surface)
IK04	protected against 0.5 joules impact (equivalent to 0.25kg mass dropped from 200mm above the surface)
IK05	protected against 0.7 joules impact (equivalent to 0.25kg mass dropped from 280mm above the surface)
IK06	protected against 1 joules impact (equivalent to 0.25kg mass dropped from 400mm above the surface)
IK07	protected against 2 joules impact (equivalent to 0.5kg mass dropped from 400mm above the surface)
IK08	protected against 5 joules impact (equivalent to 1.7kg mass dropped from 300mm above the surface)
IK09	protected against 10 joules impact (equivalent to 5.0kg mass dropped from 200mm above the surface)

protected against 20 joules impact (equivalent to 5.0kg mass dropped from 400mm above the surface)

protected against 0.14 joules impact (equivalent to 0.25kg mass dropped from 56mm above the surface)