

ICETRON®

Inductively Coupled Electrodeless Systems



- Long 100,000 hour life
- Instant on/instant restrike
- Universal voltage ballast
- Consistent color — 80 CRI
- High output electronic system
- Low temperature starting as low as -40°F
- Amalgam technology for wide operating temperature range
- 3500K & 4100K color temperatures (white light)
- Ballast remote mounting possible

SYLVANIA ICETRON® lamp and ballast system reduces maintenance cost due to the long 100,000 hour average rated life. This is five to eight times the typical service life of conventional fluorescent and metal halide lamps.

The inductively coupled electrodeless lamp uses magnetic-induction technology instead of an electrode at each end of the fluorescent tube to generate light. The absence of electrodes allows much longer lamp life.

Product Availability

SYSTEMS:

System	Life (hrs.)	System Wattage	Initial System Lumens
ICETRON 70/QT100	100,000	82	6500
ICETRON 100/QT100	100,000	107	8000
ICETRON 100/QT150	100,000	157	11,000
ICETRON 150/QT150	100,000	157	12,000

System Comparison

	System Watts	System Lumens	System LPW	System @ 10,000 hours	Life (hrs) 10 hrs/start	CRI
ICETRON 70	82	6500	79	5525	100,000	80
70W Metal Halide	90	5200	58	3400	15,000	75
2 – 1-5/8" Curvalume	57	4905	86	4400	24,000	82
ICETRON 100	107	8000	75	6800	100,000	80
100W Metal Halide	129	8500	66	5500	15,000	75
3 – 1-5/8" Curvalume	84	7360	88	6600	24,000	82
ICETRON 150	157	12,000	76	10,230	100,000	80
150W Metal Halide	185	12,900	70	8400	15,000	75

Application Information

Applications

Decorative street lighting
Tunnel
Bridge
Internally lighted signs
Low bay
Indirect
Indoor
Escalators

Application Notes

1. Universal operating position – For vertical lamp operation the amalgam tip should be positioned down.
2. Plug-in connector between lamp and ballast.
3. Universal input voltage: 120/277 volts, 50/60 Hz.
4. Low EMI – complies with FCC nonconsumer limits.

Thermal Characteristics

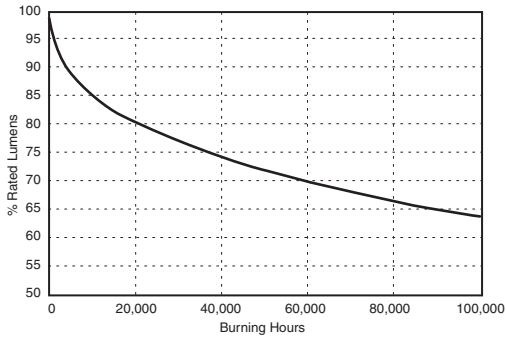
1. Fixture must act as heat sink for lamp induction cores and ballast – good thermal coupling required.
2. Maximum bulb wall temperature of 302°F (150°C).

3. Maximum fixture temperature at lamp base mounting of 212°F (100°C).
4. Amalgam tip temperature for 90% light output: 130-260°F (55-125°C).
5. Max. 158°F (70°C) ballast case temperature.
6. Ballast may be mounted up to 66 feet from lamp. See remote mounting instructions.
7. For cold temperature applications use suitably enclosed fixture to maximize lumen output.
8. Amalgam tip covers (NAED 22093) available for faster warmup under very cold operating conditions.

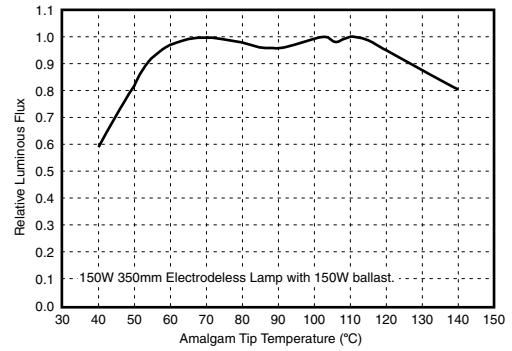


Technical Information

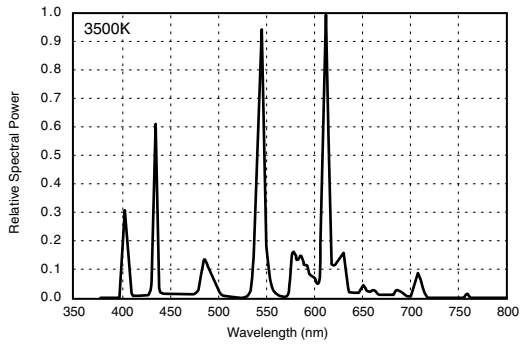
Lumen Maintenance



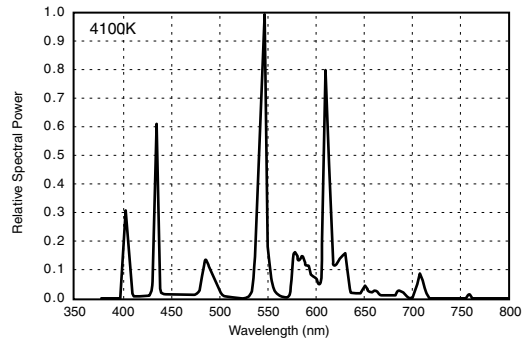
Temperature Profile



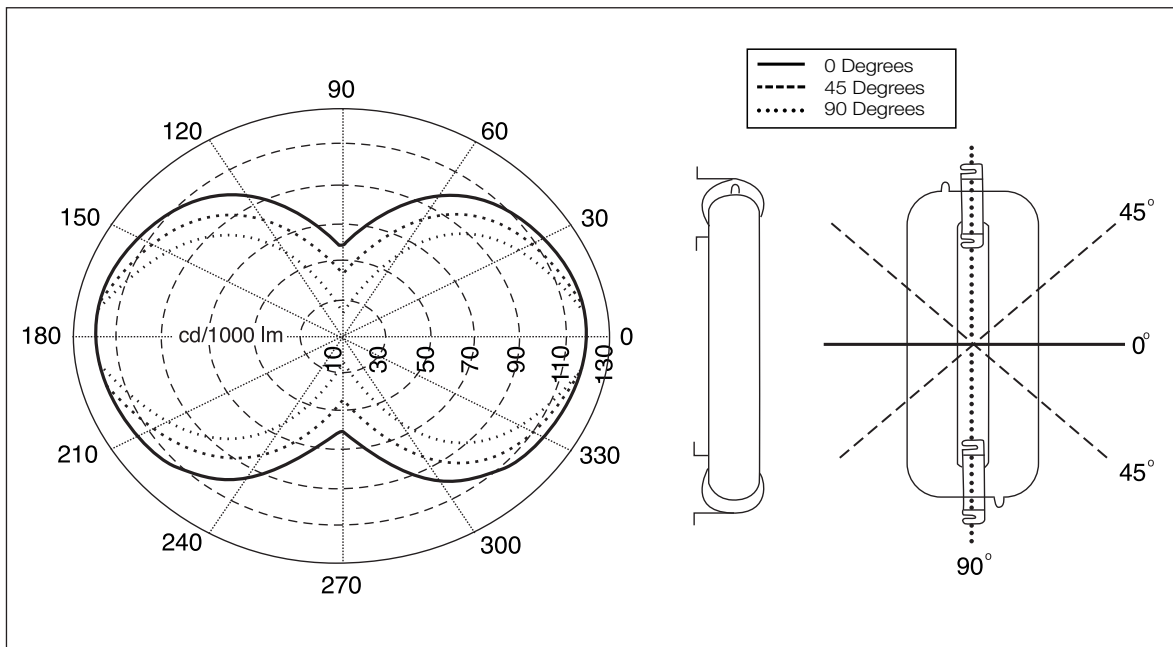
Spectral Power Distribution — 3500K



Spectral Power Distribution — 4100K



Luminous Intensity Distribution

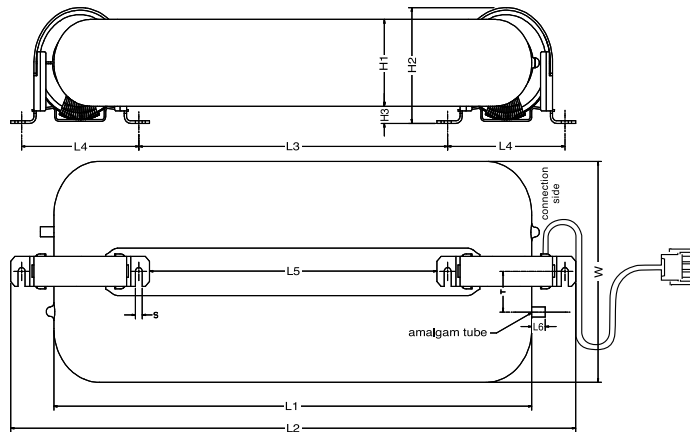


Technical Information

Lamp Dimensions*

Dim.	ICETRON70 & ICETRON100		ICETRON150	
	in.	(mm)	in.	(mm)
Height of glass	H1	2.13 (54)	2.13	(54)
Overall height	H2	2.83 (72)	2.83	(72)
Tube to mount height	H3	0.43 (11)	0.43	(11)
Length of main body	L1	9.84 (250)	13.78	(350)
Overall length	L2	12.32 (313)	16.28	(414)
Mount hole spacing (between cores)	L3	4.98 (127)	8.90	(226)
Mount hole spacing (each core)	L4	3.36 (86)	3.36	(86)
Bracket spacing	L5	4.36 (111)	8.29	(211)
Amalgam tip length	L6	0.39 (10)	0.39	(10)
Lead wire length	L7	12 (305)	12	(305)
Slot width	S	0.20 (5)	0.20	(5)
Tip to centerline	T	0.98 (25)	0.98	(25)
Width	W	5.45 (139)	5.45	(139)
Lamp Weight (lb (kg))		2.1 (0.95)	2.3	(1.1)

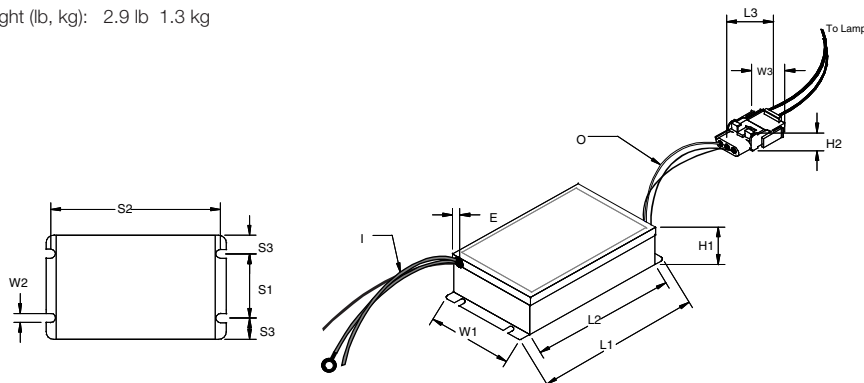
* Dimensions subject to change.



Ballast Dimensions

Dim.	in.	(mm)	
Lead wire exit – center to edge	E	.5	13
Case height	H1	1.70	43
Connector Height – max.	H2	.68	17.3
Input lead wires	I	18	457
Overall length	L1	7.15	182
Case length	L2	6.31	160
Connector length – max.	L3	1.73	44
Output lead wires – case to connector	O	12	304
Mount slot – center to center	S1	1.9	48
Mount slot – center to center	S2	6.7	170
Mount slot – center to edge	S3	.97	25
Case width	W1	3.96	101
Slot width	W2	.31	8
Connector width – max.	W3	1.18	30

Ballast weight (lb, kg): 2.9 lb 1.3 kg



Sample Specification

System shall be (70W, 100W or 150W) ICETRON inductively coupled electrodeless lamp and ballast system having (6500, 8000, 11,000 or 12,000) system lumens. System shall have an average rated life of 100,000 hours.

Warranty Information

Shall be covered for up to 60 months with a comprehensive system warranty. Refer to QUICK 60+® system warranty bulletin for additional details.

Ordering and Specification Information

SYSTEMS

System Description	Lamp Wattage	System Watts	System Lumens	Mean ¹ Lumens	Av. System Life (hrs.)	Initial LPW	Burning Position
ICETRON 70/QT100	70	82	6500	4830	100,000	79	Universal
ICETRON 100/QT100	100	107	8000	5945	100,000	75	Universal
ICETRON 100/QT150	150	157	11,000	8175	100,000	70	Universal
ICETRON 150/QT150	150	157	12,000	8915	100,000	76	Universal

LAMPS

Item Number	Ordering Abbreviation	Initial Lamp Lumens	Color Temp K ²	CRI ²
26081	ICE70/835	6200	3500	80
26082	ICE70/841	6200	4100	80
26100	ICE100/835	8000	3500	80
26101	ICE100/841	8000	4100	80
26150	ICE150/835	12,000	3500	80
26151	ICE150/841	12,000	4100	80

BALLASTS

Item Number	Ordering Abbreviation	Voltage Range	Compatible Lamps
49751	QT1X100 ICE/UNV	120-277	ICE 70 & ICE100
49771	QT1X150 ICE/UNV	120-277	ICE 100 & ICE150

1. Mean lumens at 40,000 hours

2. Color and CRI @ amalgam tip temperature of 149°F (65°C) for ICETRON 70 and ICETRON 100 and @158°F (70°C) amalgam tip temperature for ICETRON 150.

Ballast Specification

Lamp Frequency: 200-300 kHz

Input Frequency: 50/60 Hz

Voltage Range: 120 to 277 +/- 10% VAC or 120 to 277 +/- 10% VAC

UL Listed Class P, Type 1 Outdoor CSA Certification

Lamp CCF: Less than 1.7

Low THD: Less than 20%

158°F (70°C) Maximum Case Temp.

Class A Sound Rating

Minimum Starting Temperature -40°F (-40°C) for ICE100 and ICE150 systems

Minimum Starting Temperature -13°F (-25°C) for ICE70 lamps on QT1X100 ICE/UNV-T

Power Factor: Greater than 95%

FCC 47CFR Part 18 Non-consumer

ANSI 62.41 Cat. A Transient Protection

Ballast Dimensions: 7.15 x 3.96 x 1.70 inches (overall) Weight: 2.9 lb

OSRAM SYLVANIA
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Service and Sales Center
18725 N. Union Street
Westfield, IN 46074

Industrial & Commercial

Phone: 1-800-255-5042
Fax: 1-800-255-5043

National Accounts

Phone: 1-800-562-4671
Fax: 1-800-562-4674

OEM/Specialty Markets

Phone: 1-800-762-7191
Fax: 1-800-762-7192

Display/Optic

Phone: 1-888-677-2627
Fax: 1-800-762-7192

OSRAM SYLVANIA
Ballast Division
800 N. Church Street
Lake Zurich, IL 60047

Phone: 1-800-654-0089
Fax: 1-847-726-6424

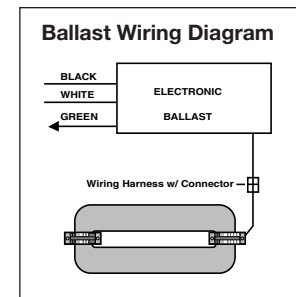
In Canada
OSRAM SYLVANIA LTD.
Headquarters
2001 Drew Road
Mississauga, ON L5S 1S4

Industrial & Commercial

Phone: 1-800-263-2852
Fax: 1-800-667-6772

Special Markets

Phone: 1-800-265-2852
Fax: 1-800-667-6772



Ordering Guide

ICE100/835					
ICE	100	/	8	35	
Inductively Coupled Electrodeless	Lamp Wattage 100W, 150W		8 = 80 CRI	35 = 3500K 41 = 4100K	
QT1X100 ICE/UNV					
QT	1X	100	-ICE	/	UNV
QUICKTRONIC	No. Lamps (1)	Lamp Wattage	Inductively Coupled Electrodeless		120 – 277 Input

Electrodeless Fluorescent Systems

QUICKTRONIC® ICE – UNIVERSAL VOLTAGE

Lamp/Ballast Guide

Lamp:
ICE 70W 2P
Ballast:
QT1x100ICE/UNV

Lamp:
ICE 100W 2P
Ballast:
QT1x100ICE/UNV
QT1x150ICE/UNV

Lamp:
ICE 150W 2P
Ballast:
QT1x150ICE/UNV

SYLVANIA QUICKTRONIC ICE operates SYLVANIA ICETRON® electrodeless fluorescent lamps with maximum efficacy and full lumen output.

SYSTEM ICE provides the longest life available from a fluorescent system in the market today. ICETRON lamps can last up to 100,000 hours, greatly reducing maintenance costs and extending relamping cycles.

Quicktronic ICE is rated for operation in environments from -40°C (-40°F) up to 50°C (122°F). With this extensive thermal performance, SYSTEM ICE is suitable for a variety of applications traditionally addressed by HID systems.

Setting the standard for quality, SYSTEM ICE is also covered by our QUICK 60+® warranty, the first and most comprehensive system warranty in the industry.

Key System Features

- 100,000 Hour lamp life
- Instant on / Instant restrike
- Universal voltage
- 100% Ballast factor or higher
- High luminous efficacy
- Quiet operation
- High power factor
- Low harmonic distortion
- UL, CSA, FCC

Application Information

SYLVANIA QUICKTRONIC ICE

is ideally suited for:

- Commercial
- Retail
- Sign Lighting
- Street Lighting
- Tunnel Lighting

System Information

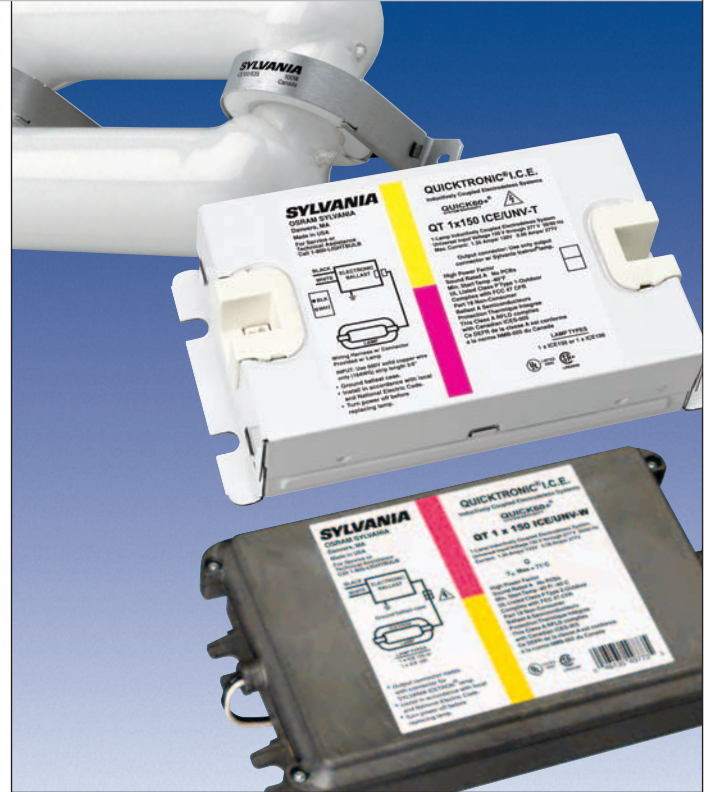
The universal voltage feature of SYSTEM ICE allows operation from a line voltage of either 120 or 277V.

QUICKTRONIC ICE utilizes a special wire/connector system required for inductively coupled systems.

The inductively coupled lamp operation allows the coil to be removed from the lamp, eliminating one of the life limiting factors in a fluorescent lamp. It reduces blackening and provides long lamp life of up to 100,000 hours, with maximum energy efficiency.

Lamp amalgam tip position will affect light output at various temperatures.

A complete ICETRON system design guide is available to assist with proper fixture design for thermal management to achieve system performance and rated life.



System Type	Input Wattage	Initial Lumens	System LPW
Metal Halide 70W FBO31 2-lamp ICE70W	90 57 79/77	5200 4900 6500	58 86 82/84
Metal Halide 100W FBO31 3-lamp ICE100	125 84 106/103	8500 7360 8000	68 88 75/77
Metal Halide 150W ICE150	180 161/156	12900 12000	72 74/76

QUICKTRONIC ICE is available in two case configurations, UL Type 1 or Type 2 Outdoor rated. The Type 1 models are suitable for general applications and the Type 2 models are ideal for harsh environments, such as damp or wet locations.

Electrodeless Fluorescent Systems

Item Number	Description	Input Voltage (VAC)	Input Current (AMPS)	Lamp Type	Rated ¹ Lumens (lm)	No. of Lamps	Ballast Factor (BF)	System Lumens	Input Wattage (W)	System Efficacy (lm/W)
49753	QT 1x100 ICE/UNV-T	120-277	0.88/0.37	ICE100	8,000	1	1.00	8,000	106/103	75/77
49756	QT 1x100 ICE/UNV-W		0.66/0.29	ICE70	6,200	1	1.05	6,500	79/77	82/84
49772	QT 1x150 ICE/UNV-T	120-277	1.34/0.58	ICE150	12,000	1	1.00	12,000	161/156	74/76
49773	QT 1x150 ICE/UNV-W		1.28/0.54	ICE100	8,000	1	1.38	11,000	154/149	71/73

¹ Rated lamp lumens and performance data based on SYLVANIA ICETRON lamps.

Use only with SYLVANIA ICETRON lamps (for additional lamp types contact OSRAM SYLVANIA).

Item Number	Lamp Description	Item Number	Lamp Description	Item Number	Lamp Description
26087	ICE 70/835/2P	26102	ICE100/835/2P	26152	ICE150/835/2P
26088	ICE 70/841/2P	26103	ICE100/841/2P	26153	ICE150/841/2P
26089	ICE 70/850/2P	26105	ICE100/850/2P	26155	ICE150/850/2P

Performance Guide

Models rated UL Type 1 ("T" suffix) are designed for general lighting applications. Models rated UL Type 2 ("W" suffix) provide protection from water intrusion and are suitable for damp or wet locations.

Specifications¹

Starting Method: I.C.E.
Circuit Type: I.C.E.
Lamp Frequency: 200–300KHz
Starting Temp: –40°F min (–13°F for 70W lamp)

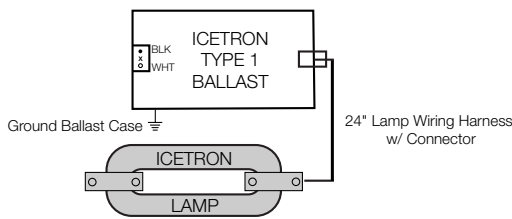
Input Frequency: 50/60 Hz
Low THD: < 15%
Power Factor: > 90%
Voltage Range: 108–305V

UL Listed Class P, Type 1 or Type 2, Outdoor
 CSA Certified
 Temp. Test Point (Tc) on ballast label:
 70°C Max (150W)
 65°C Max (100W)
 FCC 47CFR Part 18 Non-Consumer Sound Rated A
 ANSI C62.41 Cat. A Transient Protection
 Remote mounting: contact OSRAM SYLVANIA

¹ Data based on ICETRON lamp types. See the SYLVANIA QUICKTRONIC Electronic Ballast Technology and Specification Guide (ECS-ELECTRONIC) for more information.

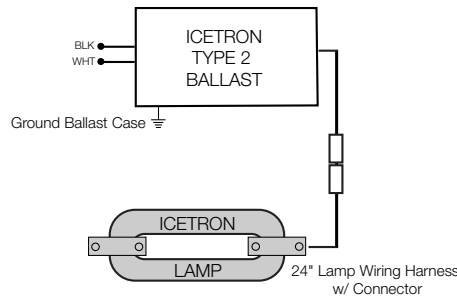
Type 1 Wiring: Connector (No leads provided)

Input: Use solid copper wire only 18 AWG, strip length 3/8"
Output: Use only output connector with SYLVANIA ICETRON® 2P lamps listed above



Type 2 Wiring:

Input: Integral lead wires, 600V, 18 AWG solid copper, approx 24" length
Output: Wire harness, approx 24" length with mating connector to lamp wiring harness

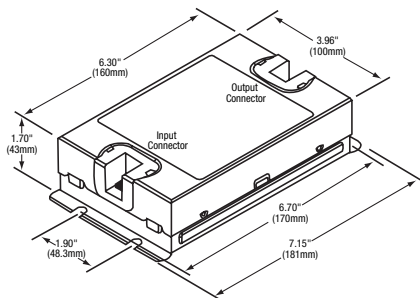


Type 1 Dimensions:

Overall: 7.15" L x 3.96" W x 1.70" H
 Mounting: 6.70" L x 1.90" W

Packaging:

Quantity: 5
 Weight: 1.9 lbs ea. (approx.)

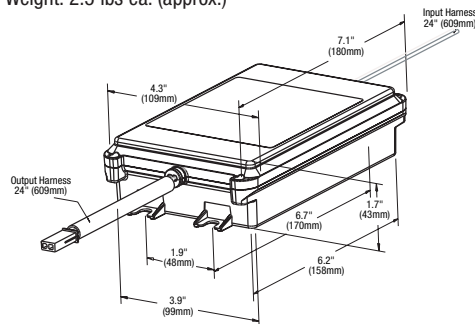


Type 2 Dimensions:

Overall: 7.10" L x 4.30" W x 1.70" H
 Mounting: 6.70" L x 1.90" W

Packaging:

Quantity: 5
 Weight: 2.5 lbs ea. (approx.)



System Life / Warranty

QUICKTRONIC® products are covered by our QUICK 60+® warranty, a comprehensive lamp and ballast system warranty. For additional details, refer to our QUICK 60+ warranty bulletin.

Ordering Guide

Specifications subject to change without notice.

Item Number	49753	QT	1 x 100	ICE / UNV-T	Case Type (Topmount or Watertight)
QUICKTRONIC					Line Voltage (120-277 VAC)
Number of Lamps (1)					System Type - ICETRON
					Primary Lamp Wattage