USHIO Applying Light to Life

UXR

Compact Xenon Lamps

Applying Light to Life

After over 55 years of relentless innovation, a tiny spark in the mind of our Japanese founder, Jiro Ushio, has grown into a guiding light in the fields of electronics, visual imaging, and life sciences. As an enduring contributor and firm advocate for the advancement of a happier and healthier society, we achieve inspiration and the drive to persist in our mission, to harness the infinite potential that perpetually unfolds in the world of light.

Despite being elevated to world market leader status by our very own clients, we have never lost our focus or sense of responsibility for those who rely on our technology each and every day. Through our dedication to this cause, we pledge our commitment to applying light to life across the world and beyond.

Light has unlimited potential: the power to decompose and purify without the use of liquids, to raise crops without being affected by the weather, to measure someone's health condition without touching them, the power to deliver breathtaking moving images. Light, which provides illumination and energy, has the power to support safe and convenient lifestyles and a prosperous society.

By harnessing the power of light, Ushio aspires to contribute to a sustainable society. Guided by this aspiration, we will continue to explore the potential of light going forward.

Since our foundation, we have concentrated on special solutions for particular market segments. We are a market leader in almost all of those areas.

Our basic philosophy is to regard product quality as an overriding priority. We are promptly providing global markets with safe, high quality products and services that are highly reliable and economically attractive to fulfil the requirements of our customers.

Simplifying complex processes and fostering partnerships for the long haul is at the heart of what we do. Our tried and tested approach is to listen to your ideas and to work together with you in developing world-class bespoke solutions. Ushio is proud to contribute to a more advanced, happier and healthier society.

Our technology enables the world to continue applying light to life.

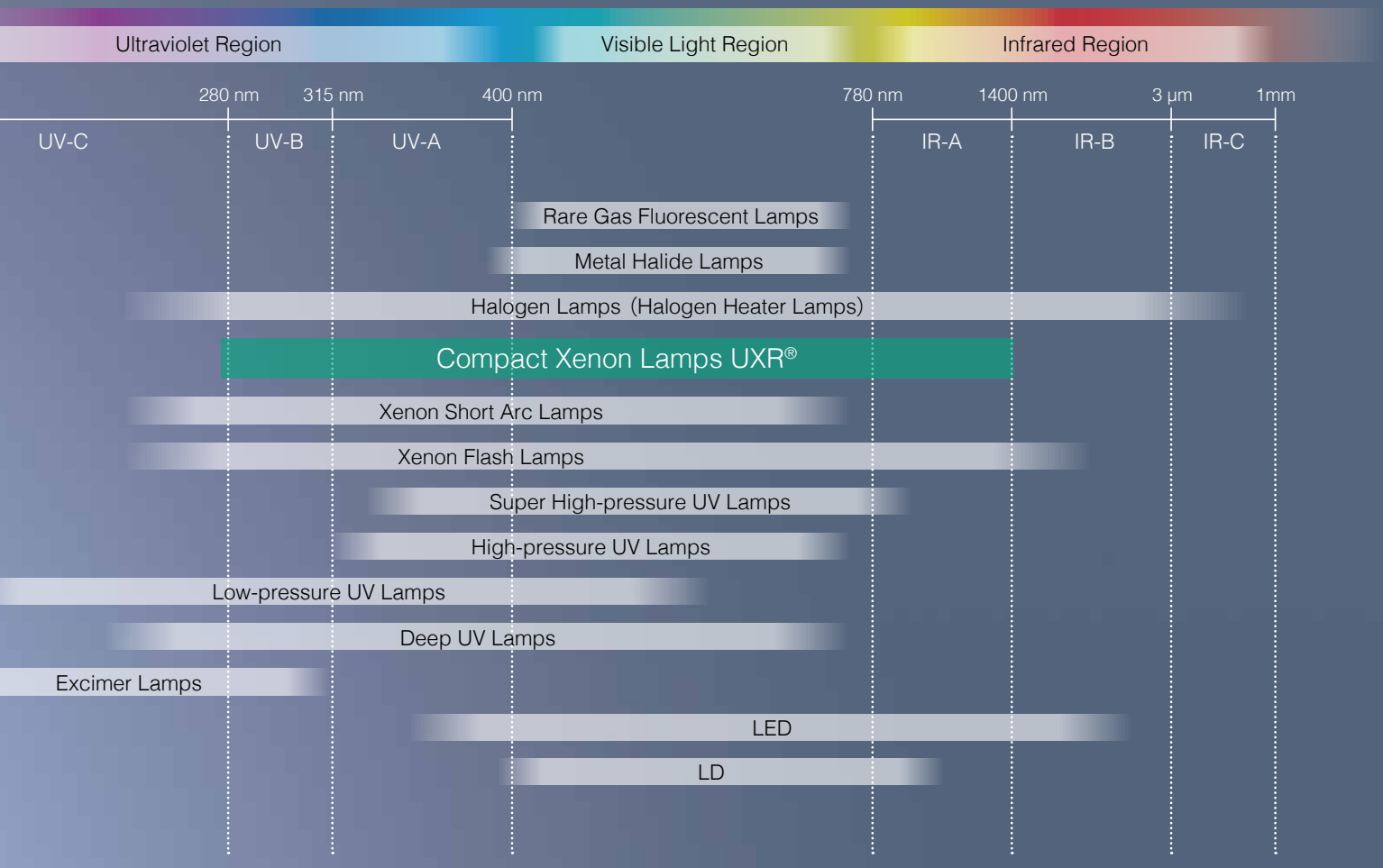
Ushio Compact Xenon Lamps

UXR®
MADE IN JAPAN

UXR® Series was originally designed and developed by Ushio using ceramics and sapphire as the principle components.

UXR® Series features high shock / pressure resistance as standard, to satisfy the various needs of our customers.

100 nm


Ultraviolet Region
Visible Light Region
Infrared Region
280 nm
315 nm
400 nm
780 nm
1400 nm
3 µm
1mm
UV-C
UV-B
UV-A
IR-A
IR-B
IR-C
Rare Gas Fluorescent Lamps
Metal Halide Lamps
Halogen Lamps (Halogen Heater Lamps)
Compact Xenon Lamps UXR®
Xenon Short Arc Lamps
Xenon Flash Lamps
Super High-pressure UV Lamps
High-pressure UV Lamps
Low-pressure UV Lamps
Deep UV Lamps
Excimer Lamps
LED
LD

Features

Superior Performance

High Lumen Maintenance

Reliability and Useability

Japanese Engineering Quality

Compact

Small Size and Lightweight

Wavelength Selectivity

Broad Spectrum Range

Built-in Mirror Type

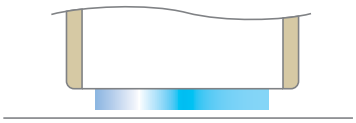
No Need for Optical Axis Adjustment

Robust Sapphire Window.

Burst-resistant

Ushio's original window construction enables to place the lamp vertically.
(window face-down)

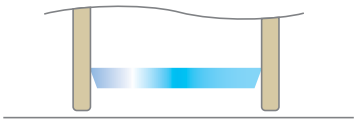
Ordinary Lamps



Contacts the window and causes surface damage〈Damage risk: Scratch, contamination, etc〉

UXR® Series

Anti-damage Window Construction



Avoid window damage through non-contact with recessed window

Applications

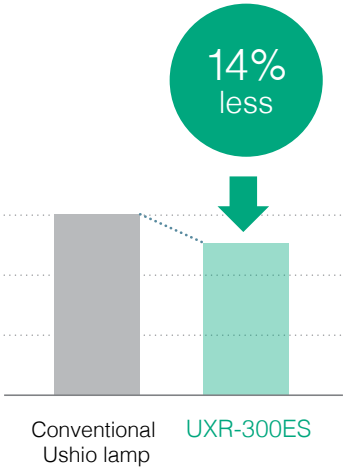
	UXR-300ES	UXR-300BF	UXR-175BF	UXR-300UV
Industrial Endoscopes	○	○	○	–
Fibre Light Sources for Headlights	○	○	○	–
High Brightness Projectors	○	○	○	–
Optical Fibre Used in Image Processing Inspection	○	○	○	–
Microscope Illumination	○	○	○	○
Visible / Infrared Searchlights	○	○	○	–
Spectroscopic Analysis	○	○	○	–
Solar Simulator	–	–	–	○

UXR-300ES

Power Conservation Through Low Power Design

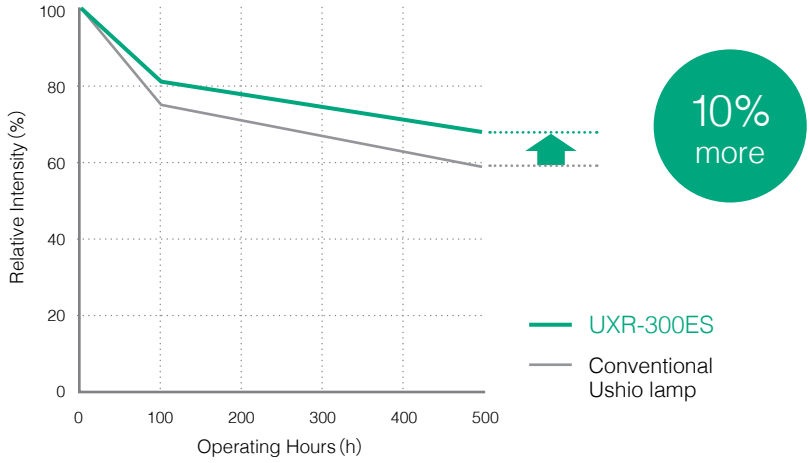
14% reduction in power consumption compared to Ushio's conventional lamps.

	Power
Conventional Ushio lamp	300 W
UXR-300ES	260 W



High Lumen Maintenance

Provides increased illuminance maintenance ratio compared to Ushio's conventional lamp models.



Easy to Install Terminal Structure

Special lamp mounting structure reduces workload of lamp replacement. Replace lamp without worrying about heat sink positioning.

Conventional Ushio lamp

UXR-300ES

Electrical Characteristics (Initial)

Lamp Power	260 W
Operating Voltage ※1	13 V
Rated Lamp Current	20 A
Lamp Current Range	18~21 A

Specifications

Arc Gap (Non-operation)	1.0 mm
Wavelength	390~1000 nm
Window Diameter	ϕ25.4 mm
Reflector	Parabola
Rated Lifetime ※2	500 hours

Initial Output ※3 (Representative Values)

Radiant Output	43 W
Visible Output	3250 lm
Visible Output (5 mm Aperture)	1400 lm
Color Temperature	6100 K

Operating Condition (Power Supply)

Power Supply	Constant Current Control Constant Power Control
Current Ripple (P-P)	Max 5%
Igniter Voltage	Min AC23 kV
Supply Voltage	Min 140 V

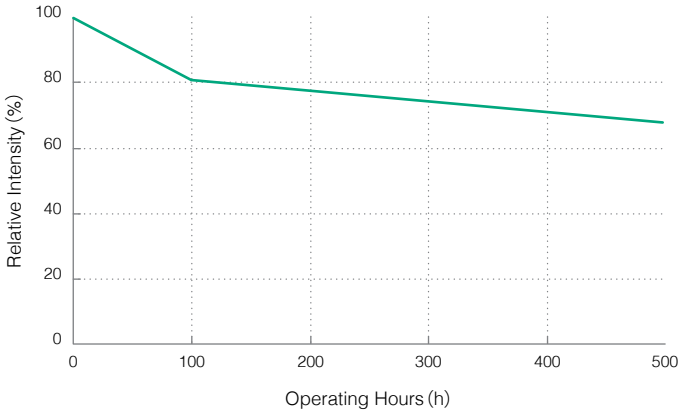
Operating Condition (Lamp)

Operating Direction		Horizontal Direction
Cooling	Ceramic Body	Max 150 °C
	Base	Max 200 °C
Forced Cooling		Necessary

※1 Operating Current: 20 A
※2 Visible output (5 mm aperture) is reduced to 50% of the initial value.
※3 Operating Current: 20 A

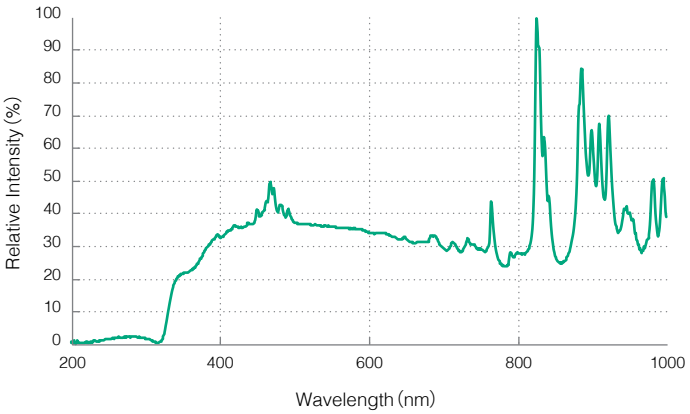
Visible Output (5 mm Aperture) Degradation

Reference value for operating at rated lamp current.

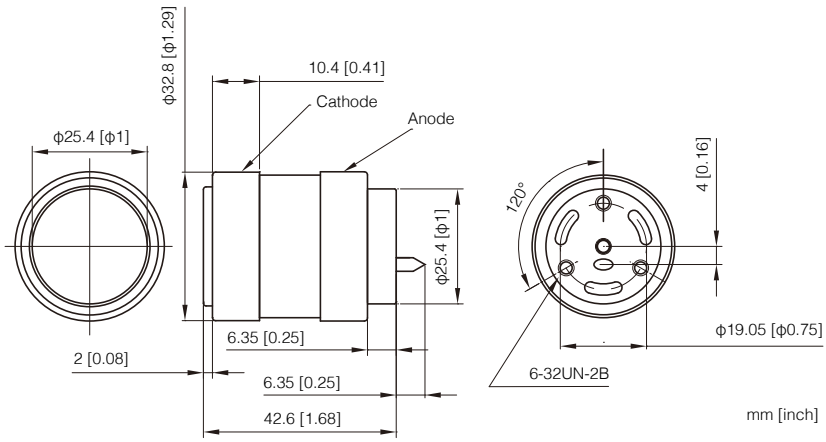


Spectral Distribution

Reference value when lamp is lit at rated lamp current.



Appearance



UXR-300BF
UXR-175BF

Electrical Characteristics (Initial)

	UXR-300BF	UXR-175BF
Lamp Power	300 W	175 W
Operating Voltage ※1	15 V	12.5 V
Rated Lamp Current	20 A	14 A
Lamp Current Range	18～21 A	12.5～16 A

Specifications

Arc Gap (Non-operation)	1.5 mm	1.1 mm
Wavelength	390～1000 nm	390～1000 nm
Window Diameter	ϕ25.4 mm	ϕ25.4 mm
Reflector	Parabola	Parabola
Rated Lifetime ※2	500 hours	500 hours

Initial Output ※3 (Representative Values)

RadiantOutput	50 W	30 W
Visible Output	4500 lm	1900 lm
Visible Output (5mm Aperture)	1830 lm	950 lm
Color Temperature	6100 K	6100 K

Operating Condition (Power Supply)

Power Supply		Constant Current Control Constant Power Control	Constant Current Control Constant Power Control
Current Ripple (P-P)		Max 5%	Max 5%
Igniter Voltage		Min AC23 kV	Min AC23 kV
Supply Voltage		Min 140 V	Min 140 V

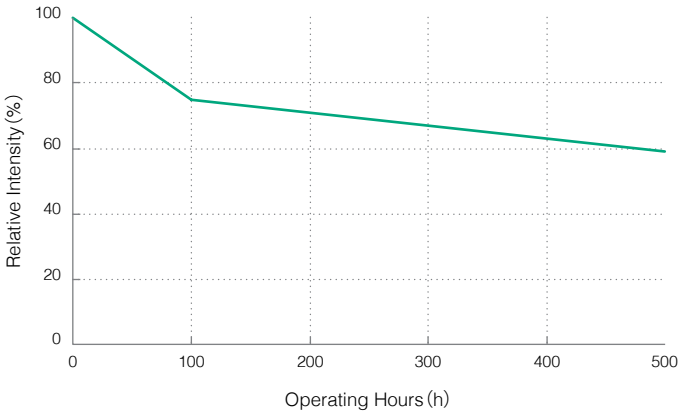
Operating Condition (Lamp)

Operating Direction		Horizontal Direction	Horizontal Direction
Cooling	Ceramic Body	Max 150°C	Max 150°C
	Base	Max 200°C	Max 200°C
Forced Cooling		Necessary	Necessary

※1 UXR-300BF: Operating Current: 20 A UXR-175BF: Operating Current: 14 A
※2 Visible output (5mm aperture) is reduced to 50% of the initial value.
※3 UXR-300BF: Operating Current: 20 A UXR-175BF: Operating Current: 14 A

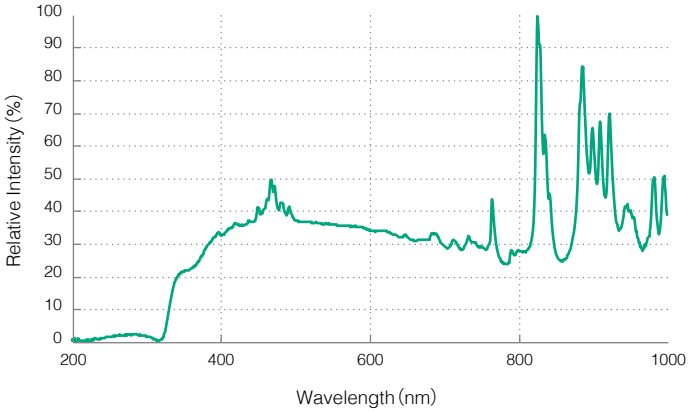
Visible Output (5 mm aperture) Degradation

Reference value for operating at rated lamp current.

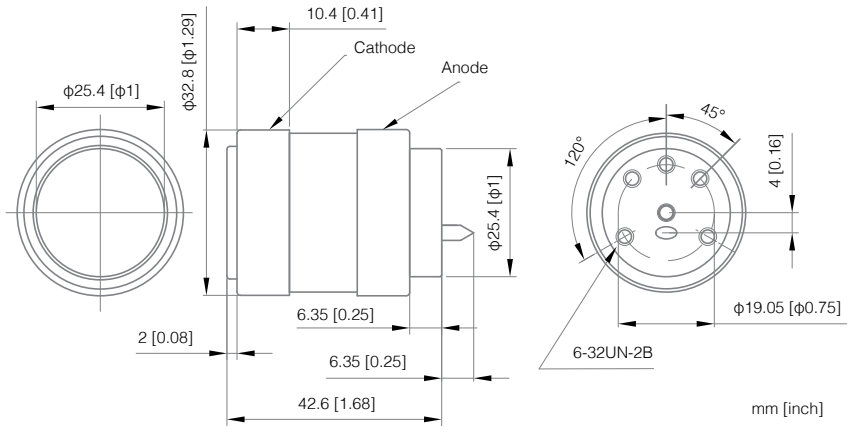


Spectral Distribution

Reference value when lamp is lit at rated lamp current.



Appearance



Safety Instructions

WARNING		◆ High internal pressure exists in the lamp. Do not apply any excessive shock, stress, or scratch to the lamp while handling. Otherwise the lamp may burst resulting in catastrophic failure. ◆ Lamp should not be operated within 45° of vertical with the window up. Otherwise thermal stress can cause window failure. ◆ Turn off the power before inserting, removing or cleaning the lamp, otherwise it could cause electrical shock. ◆ High voltage is required for ignition. Do not touch the lamp nor heat sinks during operation, especially in the instant of ignition. ◆ Do not look directly at the operating lamp. Intense infrared and ultraviolet radiation generated by the lamp can cause skin burns and severe eye damage.
CAUTION		◆ High temperature is built up during operation. Do not touch the lamp during operation and for 10 minutes, at least, after turning off. ◆ Do not operate the lamp near flammable gas or chemicals. ◆ Attach heat sinks on both bases and apply forced air cooling. Apply heat conductive grease on both bases sufficiently to obtain appropriate cooling condition. ◆ Lamp must be fixed at the anode base only, leaving cathode base free. Otherwise mechanical and thermal stress may cause explosion. Read all equipment instructions as well. ◆ The filling tip on the anode base of a replaced lamp should be cut off in order to reduce the internal pressure of the lamp.
Important Operation Notes		◆ Correct polarity and burning position are critical. ◆ Lamp must be operated less than rated current. ◆ Window of the lamp should be free from bare hands or dust. In order to remove grease stains or dust, use alcohol soaked clothes. ◆ Replace the lamp at its life end, or when blackening becomes thicker or flickering of the output becomes severe. ◆ Remove the vinyl tube on the filling tip before installation.

Developing Solutions Together

Ushio is a partner that listens to your ideas and requirements. Let us optimise your processes according to your specifications and expectations. Use our expertise to develop a tailor-made solution that matches your needs.

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Intended use: Specifically designed and exclusively approved for use in industrial or professional electrical equipment only

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