

# Shine-up Slim

The slim bulbs and the ballast compatibility is important when producing the brightest intensity of light



■ KOTO slim bulbs and your ballast make the best combination.

LAMP	MQ30E/W MQ30E/WR MQ30E/WG	You can choose any color you like.
BALLAST	KD30EP KD32EP	
LAMP	MQ30E/S MQ30B-C	In case of using the left ballast, we recommend you to use the brightest intensity of light without replacing the ballast of MQ30E/S.
BALLAST	KD30CP KD32P KD30P	

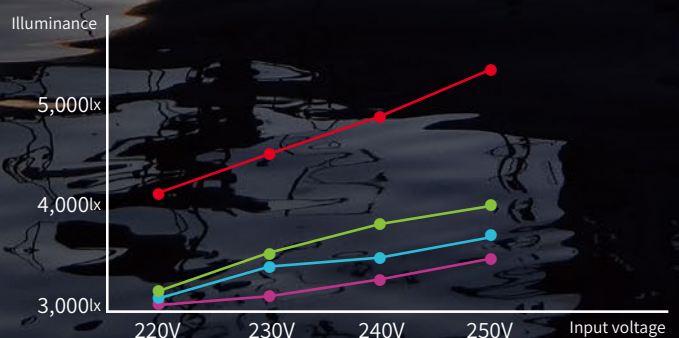
\*If it is used in combinations other than those listed above, purchase a lamp that matches the output.

\*In the case of a modified ballast, it may not match.

The graph on the right is based on our own research, and we do not guarantee matching with other companies' ballasts.

\*If you have any questions, please contact our sales representatives.

■ The combination of each lamp and stabilizer measurement.



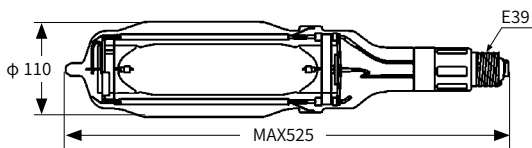
● MQ30E/W+KD30EP ● MQ30E/S+Ballast from other companies  
● MQE/W+Ballast from other companies ● Lamps from other companies+Ballast from other companies

# Boat-deck Slim Metal Halide Lamp

## Key Features

1. Luminous intensity increase by 10% (compared with existing product)
2. Stable luminous flux maintenance .
3. Adjustable color tones to match your preference.
4. High Strength with original quake-resistant design.

## MQ30E/W



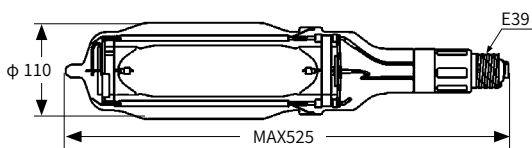
Compatible Ballast **KD30EP,KD32EP**

	Specification	Reference range
Lamp Wattage	3,000W	4,500W
Lamp Voltage	230V	230V
Lamp Current	13.5A	20.0A
Total Luminous Flux	386,000lm	600,000lm
Lumens per Watt	129lm/W	133lm/W
Color Temperature	4850K	3900K



White

## MQ30E/WG



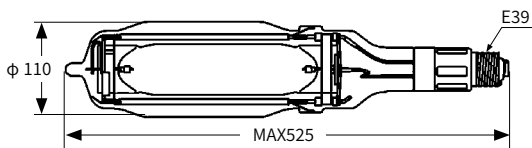
Compatible Ballast **KD30EP,KD32EP**

	Specification	Reference range
Lamp Wattage	3,000W	4,500W
Lamp Voltage	230V	230V
Lamp Current	13.5A	20.0A
Total Luminous Flux	376,500lm	584,000lm
Lumens per Watt	126lm/W	130lm/W
Color Temperature	5300K	4100K



White Green

## MQ30E/WR



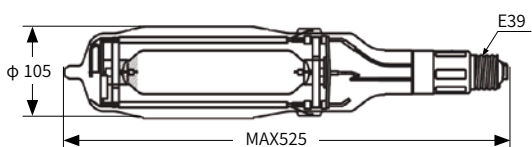
Compatible Ballast **KD30EP,KD32EP**

	Specification	Reference range
Lamp Wattage	3,000W	4,500W
Lamp Voltage	230V	230V
Lamp Current	13.5A	20.0A
Total Luminous Flux	376,500lm	602,000lm
Lumens per Watt	126lm/W	134lm/W
Color Temperature	4650K	3700K



White Red

## MQ30E/S



Compatible Ballast **KD30EP,KD32EP,KD30CP,  
KD32P,KE34P,KD30TP,  
KD32TP  
KD40TP,KD42TP  
KT41PHV (50Hz)**

	Specification	Reference range
Lamp Wattage	3,000W	4,000W
Lamp Voltage	230V	230V
Lamp Current	13.5A	18.2A
Total Luminous Flux	392,000lm	515,000lm
Lumens per Watt	131lm/W	129lm/W
Color Temperature	5000K	3900K



White

# Boat-deck Slim Metal Halide Lamp

## Slim Lamp Series

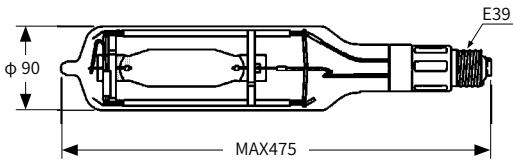
### Key Features

1. Longer life-hour by Original designed arc tube.
2. Excellent transmittance in seawater.
3. Minimum decrease in brightness through out the life-time.
4. High in safety and cuts harmful UV rays.
5. Adjustable color tones to match your preference.



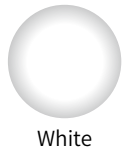
As the first manufacturer to develop a slim lamp in the industry, we are carrying out further technological advance. The lamp is designed to be size and weight reduction, water resistance type, with an emphasis on safety. It allows you the low wind pressure, energy and fuel cost saving.

### MQ15A



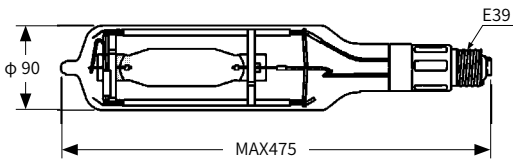
Compatible Ballast **KV1515L (50Hz)**

Specification	
Lamp Wattage	1,500W
Lamp Voltage	260V
Lamp Current	6.2A
Total Luminous Flux	195,000lm
Lumens per Watt	130lm/W
Color Temperature	4000K



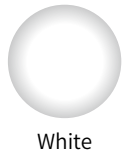
White

### MQ20A-2



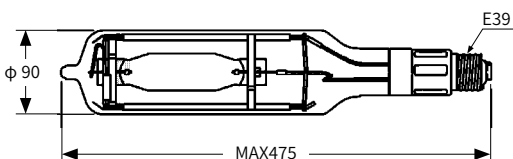
Compatible Ballast **KA22L, KV2020L (50Hz)**

Specification	Reference range		
Lamp Wattage	1,800W	2,000W	2,200W
Lamp Voltage	230V	230V	230V
Lamp Current	8.8A	9.4A	9.7A
Total Luminous Flux	216,000lm	251,000lm	288,000lm
Lumens per Watt	120lm/W	126lm/W	131lm/W
Color Temperature	4800K	4400K	4200K



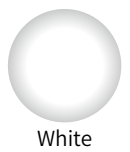
White

### MQ20A-B, MQ20-G



Compatible Ballast **KA22L, KV2020L (50Hz)**

Specification			
	MQ20A-B	Reference range	MQ20-G
Lamp Wattage	2,000W	2,200W	2,000W
Lamp Voltage	230V	240V	230V
Lamp Current	9.4A	9.7A	9.4A
Total Luminous Flux	212,000lm	250,000lm	210,000lm
Lumens per Watt	106lm/W	114lm/W	105lm/W
Color Temperature	4800K	4600K	7100K

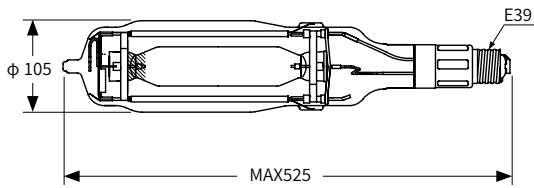


White

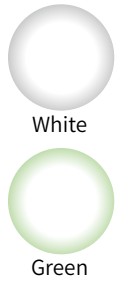


Green

## MQ30A, MQ30-G

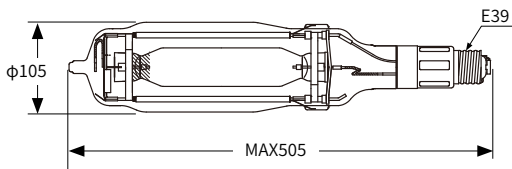


Specification		
	MQ30A	MQ30-G
Lamp Wattage	2,700W	2,700W
Lamp Voltage	230V	230V
Lamp Current	12.8A	12.8A
Total Luminous Flux	320,000lm	270,000lm
Lumens per Watt	119lm/W	100lm/W
Color Temperature	4600K	7200K

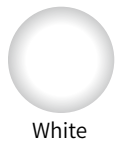


Compatible Ballast **KE30P, KE32P, KE34P**

## MQ30A-S (Short type)

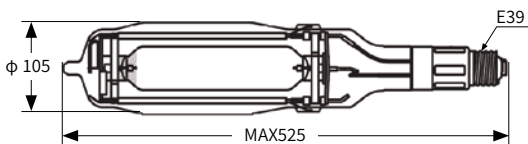


Specification	
Lamp Wattage	2,700W
Lamp Voltage	230V
Lamp Current	12.8A
Total Luminous Flux	320,000lm
Lumens per Watt	119lm/W
Color Temperature	4600K

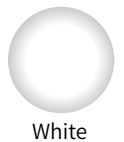


Compatible Ballast **KE30P, KE32P, KE34P**

## MQ40A-2

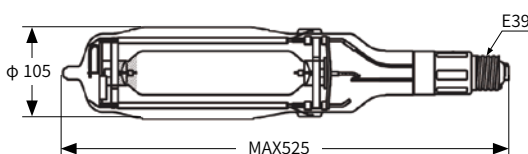


Specification	Reference range
Lamp Wattage	3,600W / 4,000W
Lamp Voltage	230V / 230V
Lamp Current	16.9A / 18.5A
Total Luminous Flux	464,000lm / 515,000lm
Lumens per Watt	129lm/W / 129lm/W
Color Temperature	3900K / 3900K

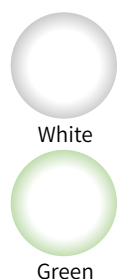


Compatible Ballast **KE34P, KD30CP, KD32P, KD30EP, KD40TP, KD42TP, KT41PHV (50Hz)**

## MQ40A-B, MQ40-G/2



Specification			
	MQ40A-B	Reference range	MQ40-G/2
Lamp Wattage	3,600W	4,000W	3,600W
Lamp Voltage	230V	230V	230V
Lamp Current	16.9A	18.5A	16.9A
Total Luminous Flux	398,000lm	451,000lm	357,000lm
Lumens per Watt	111lm/W	113lm/W	100lm/W
Color Temperature	4600K	4400K	6900K



Compatible Ballast **KE34P, KD30CP, KD32P, KD30EP, KD40TP, KD42TP, KT41PHV (50Hz)**