www.qlight.com

CATALOGUE 2018.02 Aviation Obstruction Lights



signal

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Company Introduction





Qlight Gives You a Brighter Future!

Qlight has been a world-leading provider of visual and audible status indicating systems and solutions for the last three decades. We pride ourselves in developing products which help our customer's improve productivity, safety, and quality control in the industrial automation and commercial industries. Our strong dedication to innovative products, quality assurance, well-established supply chain, customizable manufacturing and strong customer relationships have helped us earn the top market share in Korea and China. These core values have also been fundamental to our continued growth into new markets. Qlight's products are certified by the International Quality Management System (ISO14001), IECEx, ATEX, UL, NEPSI, CE, Lloyd, KIMM, and KOSHA which display our dedication to stringent quality control and product development based on safetypursuing industry standards.

Our assembly lines in Busan, South Korea and Shanghai, China presently provide a variety of more than 450 of products to more than 40 countries, based on sales offices in South Korea (Seoul, Busan) China (Shanghai, Shenzhen, Shenyang, Tianzhen, Tianjin, Wenzhou), and the U.S. (Silicon Valley). The Qlight brand reflects 30 years of research and development, certification, and manufacturing experience.

We will continue to establish ourselves as a industry-leading provider by pushing the boundaries of technology in order to enhance our customer's efficiency and safety in every industry and region of the world.



Qlight Global Networks

Country	Company name	Address	Phone
		HQ A-412, 579, Gyeongin-ro, Guro-gu, Seoul, Korea	+82-80-328-2222
Korea	Qlight Co., Ltd.	Factory 185-25, Mukbang-Ro, Sangdong-Myeon, Gimhae-si, Gyeongsangnamdo, Korea	+82-80-328-1111
USA	Qlight USA, Inc.	#341, 3003 North First St., San Jose, CA 95134 USA	+1-408-519-5740
China	SHANGHAI Qlight Electronics Co.,Ltd	#19, Nanda Road, Baoshan Area, Shanghai, China	+86-21-6651-7100

Qlight Clients Heavy industry / Ship building / Automotive / Steel / Machinery / Petrochemical / Power plants / Electronics / Semiconductor / Emergency Vehicles

	posco	DSME	SAMSUNG HEAVY INDUSTRIES	DOOSAN Doosan Infracore	HYUNDRI
SK hynix	🕢 Hanwha	🕼 НҮШЛДАІ	ELECTRONICS	Korea Expressway Corporation	C LG Electronics
() BOEING	BROMMA	CAT	ar g aralar	Danfois	Retriefs port of Call

Company History

Qlight has been striving to accomplish our mission to provide visual and audible status indicating systems and solutions to enhance our customer's work safety and efficiency for the last three decades.

Qlight

1986-1992	1993-2005	20	06-2010	2011 to Present	- Future
Business foundation and consolidation	Growing as a signal transmission device specialist		p forward & econstruction		The 2 nd growth and globalization
	201	7 08 02		2015 certificate aquired AO certification for SAOL1	
	201	6 11 09 07	(Patent # : 10 Obtained the Obtained UL	patent for "Emergency Vehicle certificate for LED signal lights	e Lightbar" (Patent # : 10-1662283
	201	5 09 06 03	Limit switch i	headquarter factory built nodels (3 items including SW2 hts (QML150/250, QMFL 500/	TS) acquired certificates from RM 600) UL listed
	201	4 10 09 08 06 01	Horn which t Fan/ tilt type LED strobe I Explosion pro IECEx certific Selected as a Non-sparkir	cates promising export company by S	t # : 10-1452447))-1452445)
	201	3 01	Portable war (Patent # : 10	ning lights for agricultural mach D-1226959)	nine applications patented
	201	2 12 09 01	LED work lig Explosion pr (SH1, SED,		patented (Patent # : 10-1219020) , SPNA) and heavy-duty warning I
	201	1 11 08 07	KCC (Korea	certified by NEPSI, SNE, SNES. Communications Commission ent applying prism system pate	•
Qlight	201	0 05 03			ght patented (Patent # : 10-09614) ned
	200	9 12	SSEL certifie LED tower lig	d by KIMM ghts compliant with the RoHS o	lirective
	200	8 04 03	1	system patented (Patent # : 20- g type lens patent acquired (pa	,
	200	7 11 05		oof electric horn (SPNA) acquin nodels including ST45, ST56,S	
	200	5 07 04	sification So	products for vessel applications ciety) certificates tes acquired for 18 products in	acquired Lloyd's (UK's Maritime (
	200			00 certificates acquired	Ŭ
Qlight	200	· · · · · · · · · · · · · · · · · · ·		Shanghai Qlight Electronic Co.	Ltd. in China
	200			Qlight Limited	
	199		Nominated for	0	on proof warning lights by Korean
	198	8 03		mit switches for vessel applicat	ions
	198	0	Established		

CATALOGUE

Aviation Obstruction Lights

INNOVATION IN ALARM & SIGNAL



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Product introductions	 6

Aviation Obstruction Light Technical Data



Application areas

Objects inside the Obstacle Restriction Area

- Obstacle certified for use at night that is 60m from the ground and is located within the Obstacle Restriction Area of an airport.
 - If the obstacle is located above the approach surface or transitional surface of the airfield.
 - If the obstacle is located above the horizontal surface or conical surface of the airfield.

Objects Outside the Obstacle Restriction Area

- · Obstacle that is 150m from the ground.
- · Chimneys, steel towers, poles, frame structures, electricity pylons, or wind turbines that are 60m from the ground.

Classification

Low Intensity A Type or Low Intensity B Type Warning Light

- Obstacle that is 150m from ground and is located within the Obstacle Restriction Area.
- . Low intensity A type model is installed on an obstacle that has limited mobility such as a boarding bridge.

Low Intensity C Type Warning Light

- Low intensity C type model(blue/flashing) is installed on an emergency vehicle or security vehicle operated inside the airport.
- Low intensity C type model(yellow/flashing) is installed on a normal vehicle or mobilize object that is operated inside the airport.

Low Intensity D Type Warning Light

• Low intensity D type model(yellow/flashing) is installed on escort vehicles that are operated inside the airport.

Medium intensity A Type Warning Light

- Medium intensity A type warning light(white/flashing) is installed in areas where trees or buildings are widespread.
- Obstacle that is 45m from the ground and is located within the Obstacle Restriction Area or an obstacle that is 150m from the ground and is located outside the Obstacle Restriction Area.

Medium intensity B Type Warning Light

- Medium intensity B type warning light(red/flashing) is installed in areas where trees or buildings are widespread.
- Obstacle that is 45m from the ground and is located within the Obstacle Restriction Area or an obstacle that is 150m from the ground and is located outside the Obstacle Restriction Area.

■ Medium intensity C Type Warning Light

- Medium intensity C type warning light(red/steady) is installed in areas where trees or buildings are widespread.
- Obstacle that is 45m from the ground and is located within the Obstacle Restriction Area or an obstacle that is 150m from the ground and is located outside the Obstacle Restriction Area.
- · Medium intensity C type warning light(red/steady) cannot be used with other warning lights.

Requirements

1	2	3	4	5	6	7	8	9	10	11	12
			Max imum intensity of light(cd)			Straight	intensity of light depending on angle(cd)				
Classification	Color	Operation	Above 500cd/m ² (Day time)	Above 50-500cd/m ² (Twilight)	Below 50cd/m ² (Night time)	beam spread angle	-10°	-1°	±0°	+6°	+10°
Low intensity A type (Stationary)	Red	Steady	Non	Above10	above10	10°	—	_	_	Above 10	Above 10
Low intensity B type (Stationary)	Red	Steady	Non	Above32	above32	10°	—	—	_	Above 32	Above 32
Low intensity C type (Moving obstacle)	Amber/ Blue	Flashing(60-90fpm)	Non	40 - 400	40 - 400	12°	_	_	_	_	_
Low intensity D type (Escort vehicle)	Amber	Flashing(60-90fpm)	Non	200 - 400	200 - 400	12°	_	—	_	_	_
Medium intensity A type	White	Flashing(20-60fpm)	20000±25%	20000±25%	2000±25%	Above 3°	Below 3%	50% - 75%	Above 100%	_	_
Medium intensity B type	Red	Flashing(20-60fpm)	Non	Non	2000±25%	Above 3°	_	50% - 75%	Above 100%	_	_
Medium intensity C type	Red	Steady	Non	Non	2000±25%	Above 3°	_	50% - 75%	Above 100%	_	_
High intensity A type	White	Flashing(40-60fpm)	200000±25%	20000±25%	2000±25%	3°-7°	Below 3%	50% - 75%	Above 100%	_	_
High intensity B type	White	Flashing(40-60fpm)	100000±25%	20000±25%	2000±25%	3°-7°	Below 3%	50% - 75%	Above 100%	_	—

Specification List for Aviation Obstruction Lights



Model	number(series)	SAOL1	QAOL1	SAOL2	SAOL3	SAOL4	
	Voltage	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	
	Diameter	Ø115	Ø117	Ø139	Ø157	Ø180	
Dimension (mm)	Height	275	267	185(SAOL2) 273(SAOL2P)	215(SAOL3) 303(SAOL3P)	290	
	Depth	-	-	-	-	-	
	Materials	Lens, Housing-PC Bracket-Al	Lens, Housing-PC Bracket-Al	Lens-PC, Housing-Al Bracket-Al	Lens-PC, Housing-Al Bracket-Al	Lens-PC, Housing-Al Bracket-Al	
Light source & Operation	Bulb Steady/Flashing Bulb Revolving LED Revolving LED Steady/Flashing LED Strobe LED Simulated revolving xenon Strobe	●(Steady)	• (Flashing)	•(Steady)	•(Steady)	•	
	Nount type	Self stand	Self stand	Self stand	Self stand	Self stand	
	Cable entry	-	-	-	-	-	
	tection rating Certificate	IP56 ICAO	IP56 ICAO	IP66 ICAO	IP66 ICAO	IP66 ICAO	
Cı	ustomization	-	-	Cable entry - 1/2"PF, Built-in SUN switch	Cable entry - 1/2"PF, Built-in SUN switch	Cable entry - 1/2″PF, Built-in SUN switch	
	Page	P6	P7	P8	P9	P10	



Mode	I number(series)	QEAL1	QEAL2	
	Voltage	DC12V, DC24V AC110V, AC220V	DC12V, DC24V AC110V, AC220V	
	Diameter	Ø152(Cage)	Ø167(Cage)	
Dimension (mm)	Height	238	287	
	Depth	183(Length)	172(Length)	
	Materials	Lens-Tempered glass Housing-Al	Lens-Tempered glass Housing-Al	
Light source & Operation	Bulb Steady/Flashing Bulb Revolving LED Revolving LED Steady/Flashing LED Strobe LED Simulated revolving xenon Strobe	•(Steady)	• (Flashing)	
	Mount type	Self stand	Self stand	
(Cable entry	1/2" NPT	1/2" NPT	
Pro	otection rating	IP66	IP66	
	Certificate	KOSHA	KOSHA	
Explo	sion proof rating	Ex d IIC T4 (KOSHA)	Ex d IIC T4 (KOSHA)	
С	ustomization	Explosion proof cable gland, 2 ways cable entry, Cable entry : M20x1.5, Built-in SUN switch	Explosion proof cable gland, 2 ways cable entry, Cable entry : ¾" NPT, M20x1.5, M25x1.5, Built-in SUN switch	
	Page	P11	P12	



(Units : mm)

Low Intensity LED Aviation Obstruction Light



Applied on tall structures for collision avoidance measures and airport runway safety



Obtained

SAOL1

Certification from the International Civil Aviation Organization



SAOL1

() Common Specifications(SAOL1/ SAOL2/ SAOL3/ SAOL4)

- LED light bulbs with increased lifetime decreases the replacement cost of the light source (LED lasts 25 times longer than a standard lamp bulb)
- For SAOL2 and SAOL3 type, can select between direct mount and pole mount type to fit your application needs
- Excellent durability from a selection of a polycarbonate or an aluminum housing structure
- Terminals located inside the housing for wiring (SAOL2/ SAOL3/ SAOL4)
- Built-in SUN switch available upon request which activates a system that automatically operates the product when darkness is detected

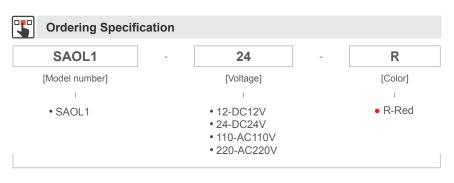
SAOL1 Low Intensity LED Aviation Obstruction Light

• Low intensity A type aviation obstruction lights are installed onto fixed objects that are less than 150m from the land or water surface

ICAO standard	Low intensity A type					
Light source	High intensity light en	nitting diodes(LED)				
Light color	Red					
Light function	Steady	Steady				
Voltage	DC12V, DC24V, AC110V, AC220V					
Power consumption	20W					
Standard housing color	Black	Cable entry	Ø20			
Materials	Lens-PC, Housing-PC, Lens ring- SUS316L, Pole-Al, Bracket-Al					
Protection rating	IP56	Ambient operating temperature	-30°C to +50°C			
Certificate	ICAO compliant	Luminous intensity	17cd ±25%			

Technical Diagram







Low Intensity LED Aviation Obstruction Light





Collision avoidance lights for running automobile and moving objectives in airport runway and aerodrome



Obtained Certification from the International Civil Aviation Organization



QAOL1

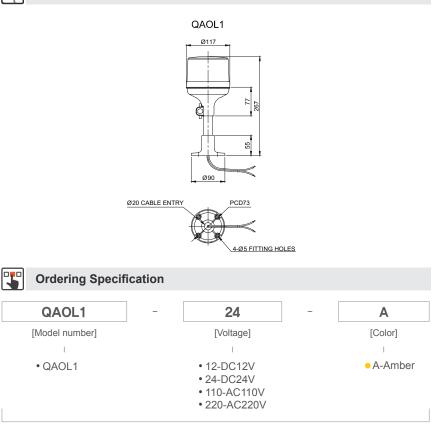
QAOL1 Low Intensity LED Aviation Obstruction Light

• Low intensity type C is intended for automobile and moving objectives in airport runway and aerodrome.

ICAO standard	Low intensity C type					
Light source	High intensity light emittir	ng diodes(LED)				
Light color	Amber					
Light function	Flashing	Flashing				
Voltage	DC12V, DC24V, AC110V, AC220V					
Power consumption	20W					
Standard housing color	Black	Cable entry	Ø20			
Materials	Lens-PC, Housing-PC, P	Lens-PC, Housing-PC, Pole-SUS304, Bracket-Al				
Protection rating	IP56	Ambient operating temperature	-30°C to +50°C			
Certificate	ICAO compliant	Luminous intensity	200cd/m			

Technical Diagram

(Units : mm)







Low Intensity LED Aviation Obstruction Light

IP66

Applied on tall structures for collision avoidance measures and airport runway safety



Obtained **Certification from the International Civil Aviation Organization**



SAOL2



SAOL2P

Wire is not exposed outside in the pole mount model.

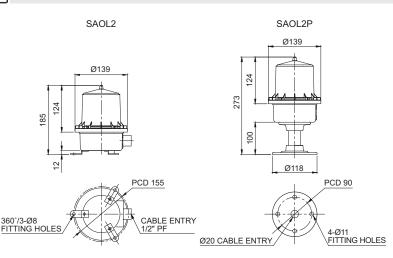
SAOL2 Low Intensity LED Aviation Obstruction Light

· Low intensity A type aviation obstruction lights are installed onto fixed objects that are less than 150m from the land or water surface

ICAO standard	Low intensity A type					
Light source	High intensity light er	mitting diodes				
Light color	Red					
Light function	Steady	Steady				
Voltage	DC12V, DC24V, AC1	DC12V, DC24V, AC110V, AC220V				
Power consumption	20W					
Standard housing color	Red	Cable entry	1/2"PF			
Materials	Lens-PC, Housing-Al					
Protection rating	IP66	Ambient operating temperature	-30°C to +50°C			
Certificates	ICAO compliant	Luminous intensity	19cd ±25%			

Technical Diagram

(Units : mm)





- Cable gland 1/2"PF
- Standard model is not equipped with cable gland
- · Built-in darkness detecting sensor available

[Voltage]	[Color]
L	I
2-DC12V 4-DC24V 10-AC110V 20-AC220V	• R-Red
1	2-DC12V 4-DC24V 10-AC110V







Low Intensity LED Aviation Obstruction Light

Applied on tall

structures for collision avoidance measures and airport runway safety



Obtained Certification from the International Civil Aviation Organization



SAOL3



Wire is not exposed outside in the pole mount model.

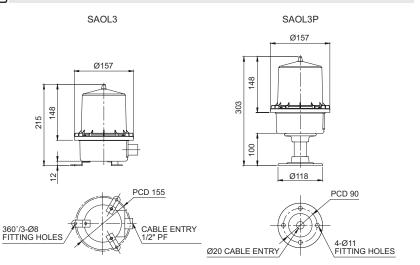
SAOL3 Low Intensity LED Aviation Obstruction Light

• Low intensity B type aviation obstruction lights are installed onto fixed objects that are less than 150m from the land or water surface

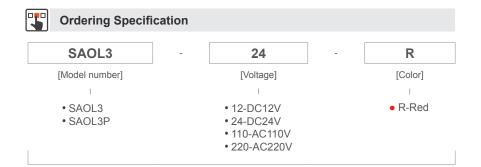
ICAO standard	Low intensity B type				
Light source	High intensity light er	mitting diodes			
Light color	Red				
Light function	Steady				
Voltage	DC12V, DC24V, AC1	10V, AC220V			
Power consumption	30W				
Standard housing color	Red	Cable entry	1/2"PF		
Materials	Lens-PC, Housing-A	I			
Protection rating	IP66	Ambient operating temperature	-30°C to +50°C		
Certificates	ICAO compliant	Luminous intensity	48cd/m		

Technical Diagram

(Units : mm)



- Cable gland 1/2"PF
- Standard model is not equipped with cable gland
- · Built-in darkness detecting sensor available





Medium Intensity LED Aviation Obstruction Light

Applied on tall structures for collision

structures for collision avoidance measures and airport runway safety



Obtained Certification from the International Civil Aviation Organization



SAOL4

SAOL4 Medium Intensity LED Aviation Obstruction Light

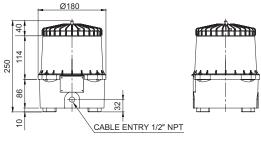
• Medium intensity A, B and C type aviation obstruction lights are installed onto objects higher than 45m within the Obstacle Restriction Area or higher than 150m outside the Obstacle Restriction Area

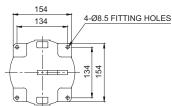
ICAO standard	Medium intensity A, B and C type		
Light source	High intensity light emitting diodes(LED)		
Light color	Red, White		
Light function	Flashing(A and B type), Steady(C type)		
Flashing rate	20-60 flashes/min		
Voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	130W		
Standard housing color	Red	Cable entry	1/2" NPT
Materials	Lens-PC, Housing-Al, Cover-Al, Heat sink-Al		
Protection rating	IP66	Ambient operating temperature	-30°C to +50°C
Certificates	ICAO compliant	Luminous intensity	2,000cd ± 25%

🎢 Technical Diagram

SAOL4

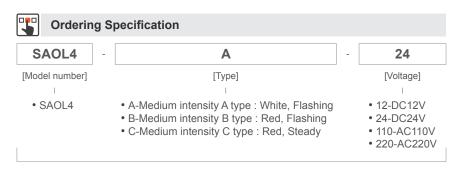
(Units : mm)







- Cable gland(connector)
- Standard model is not equipped with cable gland(connector)
- Built-in darkness detecting sensor available





Explosion Proof Low Intensity LED Aviation Obstruction Light



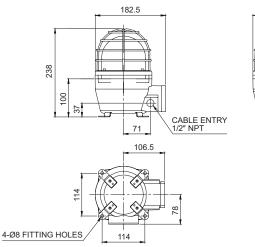
QEAL1 Explosion Proof Low Intensity LED Aviation Obstruction Light

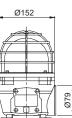
- · Low Intensity B type explosion proof aviation obstruction light
- Features high visibility from a distance with the direct LED light distribution system
- Cost savings enabled by using a long lasting LED light source which eliminates the need for maintenance
- Aluminum housing provides excellent durability
- Terminals located inside the housing for wiring
- Protection rating : Ex d II C T4, IP66

ICAO standard	Low intensity B type		
Light source	High intensity light emitting diodes(LED)		
Light color	Red		
Light function	Steady		
Voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	30W		
Standard housing color	Red	Cable entry	1/2" NPT
Materials	Lens-Tempered glass, Housing-Al, Lens ring- SUS316L, Protection cage-SUS316L, Heat sink-Al		
Protection rating	IP66	Ambient operating temperature	$-40^{\circ}C \le T_{amb} \le +60^{\circ}C$
Certificate	KC(KOSHA)	Luminous intensity	50cd ±25%

🎢 🛛 Technical Diagram

QEAL1



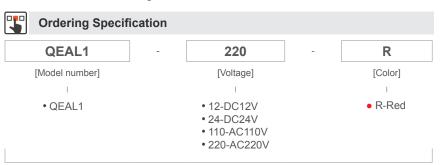


(Units : mm)



Explosion proof aviation obstruction lights are installed within hazardous areas on a surface that is more than 60m from the water surface or land such as towers and smokestacks.

- Built-in explosion proof cable gland available(Standard type does not provide explosion proof cable gland)
- Customized 2 cable entries available
- Customized cable entry(M20×1.5) available
- · Built-in darkness detecting sensor available





QEAL1





QEAL2

Explosion Proof Medium Intensity LED Aviation Obstruction Light

QEAL2 Explosion Proof Medium Intensity LED Aviation Obstruction Light

Qlight

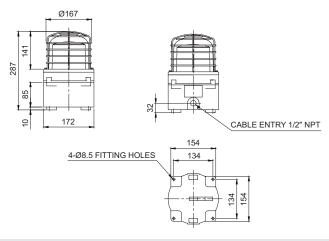
(Units : mm)

- Explosion proof medium intensity A and B type aviation obstruction light
- LED light distribution structure that directly radiates light to the user for excellent visibility
- Using semi-permanent lifetime of the LED light source decreases the light source replacement cost
- Excellent durability by adopting aluminum housing
- Built-in terminal for power line inside of housing
- Protection rating : Ex d II C T4, IP66

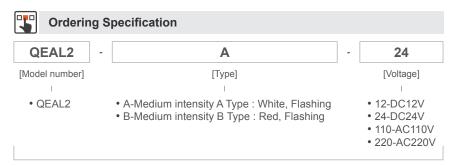
ICAO standard	Medium intensity A and B type		
Light source	High intensity light emitting diodes(LED)		
0	0 , 0	Ig diodes(LLD)	
Light color	Red, White		
Light function	Flashing		
Flashing rate	20-60 flashes/min		
Voltage	DC12V, DC24V, AC110V, AC220V		
Power consumption	130W		
Standard housing color	Red	Cable entry	1/2" NPT
Materials	Lens-Tempered glass, Housing-Al, Protection cage-SUS316L, Heat sink-Al		
Protection rating	IP66	Ambient operating temperature	$-40^{\circ}C \le T_{amb} \le +60^{\circ}C$
Certificates	KC(KOSHA) compliant	Luminous intensity	2,000cd ± 25%

🎢 Technical Diagram

QEAL2



- Explosion proof cable gland attached type available (Standard type does not come with explosion proof cable gland)
- Customized 2 way cable entries
- Customized cable entry (3/4" NPT, M20×1.5, M25×1.5) available
- Built-in darkness detecting sensor available



Technical Certification

Qlight products are designed to meet strict quality and technical standards. Thus, the Qlight brand is widely recognized for its high quality and technical innovations from leading institutions around the world.



Qight



This catalogue helps users quickly identify the product's specifications and features by using several types of icons. If you understand the concept for each icon, you will find it easy to understand the catalogue information.

Light Source and Operating Mode Icons

Icon	Operating Mode	Icon	Operating Mode
2	Bulb steady type		Bulb steady/flashing type
	Bulb revolving type		LED revolving type
Ļ	LED steady type	Ĥ	LED steady/ flashing type
\$	LED simulated revolving type		LED strobe type
<i>ؿ</i>	Xenon lamp strobe type		

Acoustic Signal Icons

Icon	Operating Mode	Icon	Operating Mode
BUZZER	Buzzer	())) SPK	Speaker
	Horn		Bell
	Motor siren	SD mp3	MP3
105dB ((c-)	Decibel		

Specifications Icons

Icon	Operating Mode	Icon	Operating Mode
MAGNET	Magnet type	-20-+40°c	Ambient operating temperature
S NPN	NPN type transistor	S PNP	PNP type transistor
IP66	IP rating	WIRELESS	Wireless Network

Detail Icons

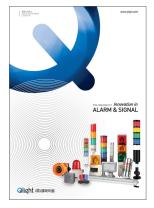
Icon	Operating Mode	lcon	Operating Mode
	Common specification	A	External view drawing
ج م م	Wiring	٤	Mounting
	User specifications		Model selection

Qlight

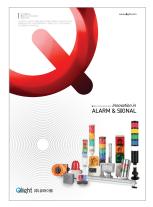
Qlight Catalogue Introduction

Qlight produces a wide variety of product categories which offers the customer the ability to select the suitable device for their application needs and environments.

There are warning/signal lights, electric signal horns, signal tower lights, warning light bars, PC control tower lights, industrial LED lights, aviation obstruction lights, and limit switches.



Total Catalogue



Simple Catalogue

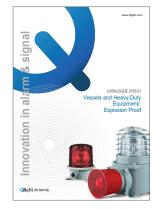




Signal Tower Lights



Warning/ Signal/ Signal & Electric Horn



Vessels and Heavy-Duty Equipment/ Explosion Proof



Warning Light Bar



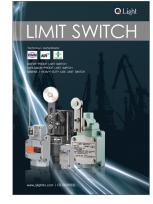
Aviation Obstruction Lights



Wireless Network System



Agriculture Machine Warning Light



Limit Switch



For Steel Manufacturing Facilities



Specification and dimensions listed in this catalogue are subject to change without prior notice for product quality improvement. The newest product information is available on our web site. (www.qlight.com) Please read the Instruction Manual attached to the product carefully before installation and use.



Signal Tower Lights Warning/ Signal & Electric Horn Vessels and Heavy-Duty & Equipment/ Explosion Proof Warning Light Bar Aviation Obstruction Lights Industrial LED Lights

Qlight Co., Ltd. www.qlight.com | qlightkr@qlight.com

Head Office | A-412, 579, Gyeongin-ro, Guro-gu, Seoul, Korea Tel. +82-80-328-2222 Fax : +82-2-2679-6154 Factory | 185-25, Mukbang-Ro, Sangdong-Myeon, Gimhae-si, Gyeongsangnamdo, Korea Tel. +82-80-328-1111 Qlight Public Relations & Marketing Team Office | Nakdong-daero, Sasang-gu, Busan, Korea(Eomgung-Dong) Tel : +82-51-245-0017

Qlight USA, Inc. www.qlight.com www.qlightusa.com | *sales@qlightusa.com* 3003 North First Street, Suite #341, San Jose, CA 95134 USA Tel. +1.408.519.5740 Fax. +1.408.519.5739

SHANGHAI Qlight Electronic Co., Ltd. www.qlight.com www.qlightcn.com | qlightcn@qlight.com China Factory/ Shanghai Sales Office | #19, Nanda Road, Baoshan Area, Shanghai, China Tel. +86.21.6651.7100 Fax. +86.21.6315.3929



WARNING LIGHT | ELECTRONIC HORN | SIGNAL TOWER LIGHT | EMERGENCY LIGHT BAR | LED OBSTRUCTION LIGHT | LED WORK LIGHT