Lighting for industrial refrigeration

Sammode

HACCP — CERTIFIED FOOD SAFETY, Hazard Analysis Critical Control Point

international food standard — IFS

BRC FOOD CERTIFICATED
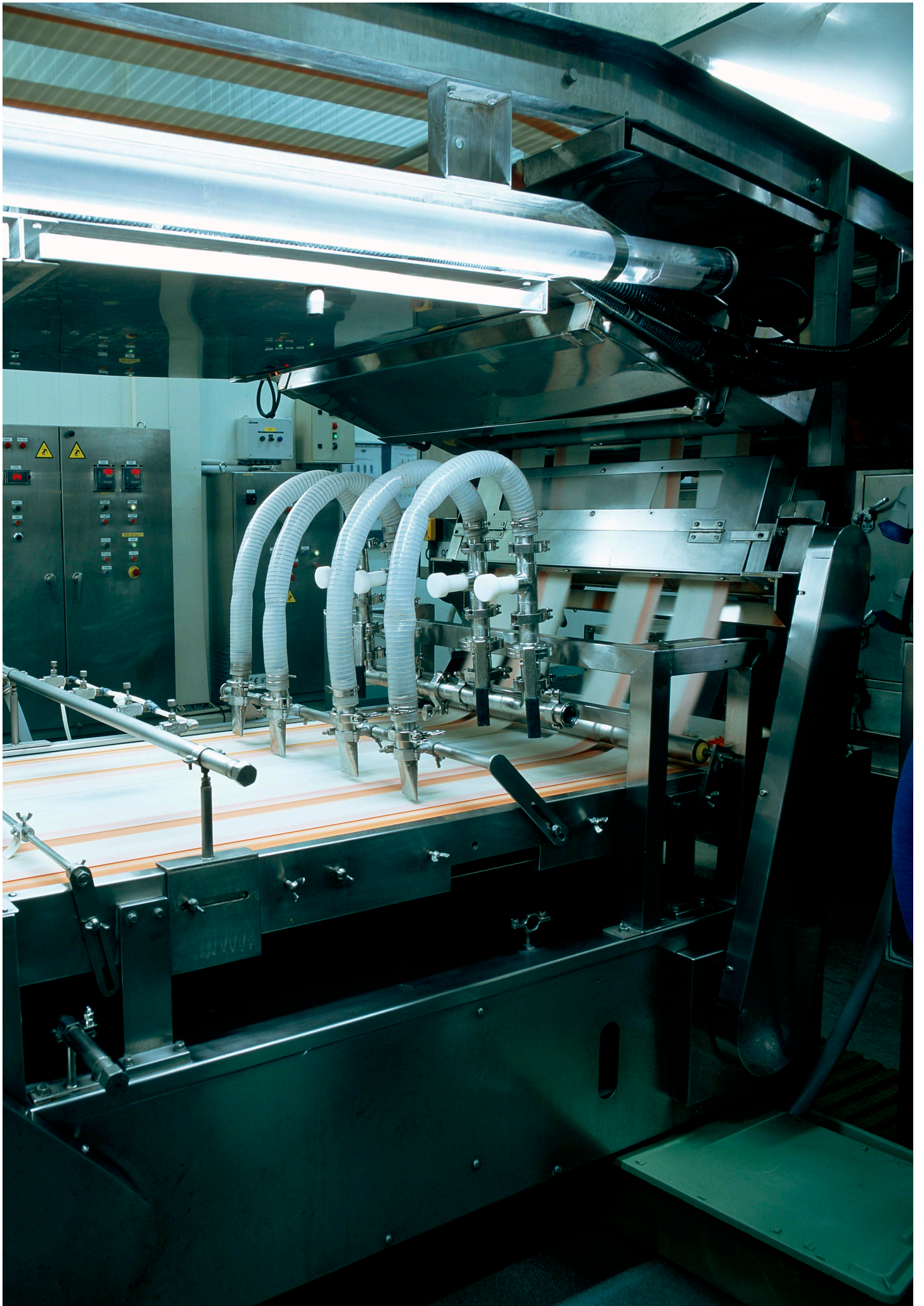
Lighting solutions for industrial refrigeration

Industrial refrigeration lighting requires special precautions, especially in the food processing industry. We offer luminaires that are ideal for cold storage rooms and other refrigerated areas.
They offer five aspects garanteeing the reliability of a long-term investment.

Resistant to thermal and mechanical impacts even at very low temperature:

- Single-piece housing principle to absorb thermal expansionand mechanical stress
- Robust casing resisting IK10 mechanical impacts
- Resistance to vibrations according IEC 60068-2-6
- Robust power supply conceived for an intensive operation at low temperatures

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Designed to meet hygiene requirements in the food industry:

- Absolute and durable imperviousness IP68/IP69K
- Absence of frost formation
- High resistance to chemical detergent agressions thanks to a coextruded polycarbonate and methacrylate housing

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Optimized to limit the consumption of your installation:

- Optical solutions conceived for each of your application to optimise the number of lights
- High efficient LED modules allowing to lower energy consumption related to lighting
- Compatible with detector cell use

Assurance of a long-term commitment

With its experience in extreme environments, Sammode provides you with durable solutions up to 8 years warranty in intensive use, 24-hour/7-day.

A partner at your side

- Diagnosis of your installation with regard to your constraints
- Definition of the best technical solution
- Lighting study to optimise your installation

Our sales and lighting design office teams are always available to answer your questions and help you identify the most appropriate product for your requirements.

# Lighting solutions dedicated to food process

IFS, BRC and HACCP standards

The Sammode light fitting are designed to fullfill the requirements
of the IFS, BRC and HACCP standards for lighting application in the process
of certification:

- All work areas must be correctly illuminated.

- All lighting equipment must be protected by anti-burst protection
  and must be designed to minimise the risks of any breakage of glass.

Security and easy cleaning
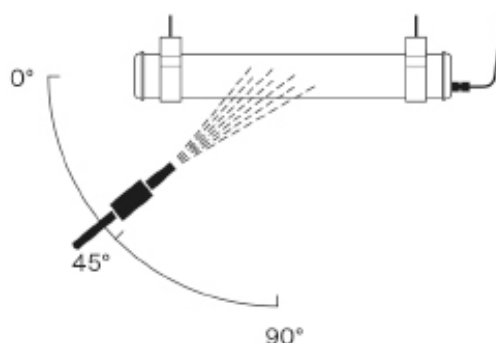
Our luminaires conception and the choice of materials enable our lighting
solutions to resist to impacts, detergent factors and high pressure cleaning
(IP69K).

They benefit from a unique envelop which resists impacts and chemical
agressions. The envelop is composed of a polycarbonate diffuser with
an integrated coextruded PMMA layer.

The alliance of mechanical polycarbonate (IK10) characteristics and PMMA
chemical resistance provides the ideal protection during cleaning
and maintenance stages of your site.

This PMMA layer resists to detergent factors and complies with
requirements for objects and materials made with plastic that are intended
to be in touch with agri-food commodities
(Europe : 2002/72/EC, 2004/19/EC, 2005/79/EC et 2007/19/EC).
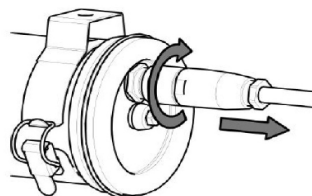
PMMA

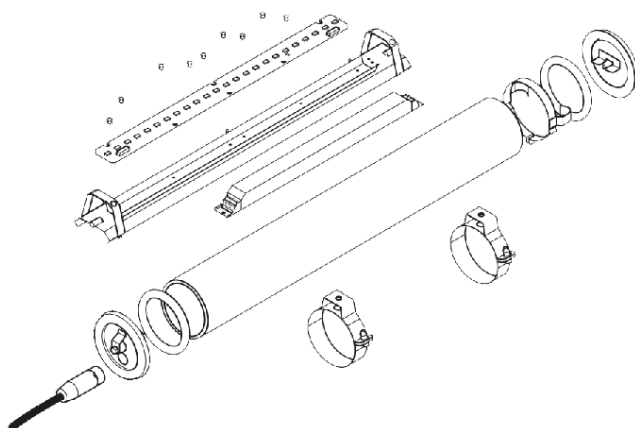Polycarbonate
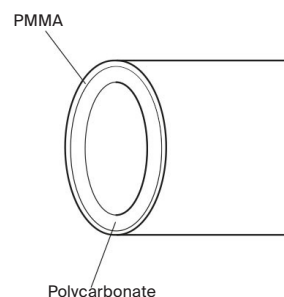
Easy implementation and maintenance
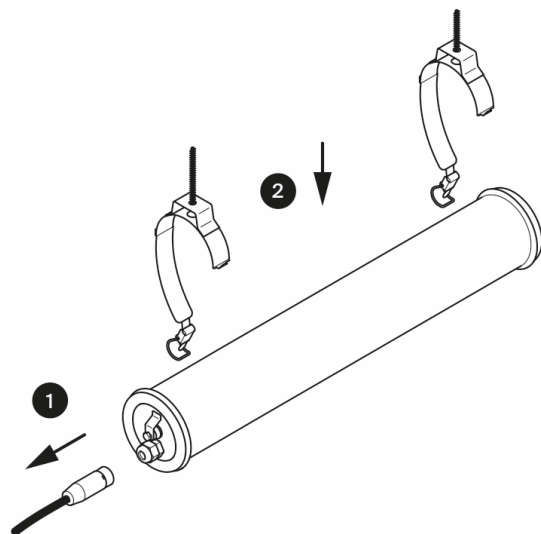
Fixing straps and plug system makes the light fitting easy to maintain outside the process zone:

- Facilitated maintenance (fast opening of the brackets and unpluggable power outlets) outside the process zone

- No loss of pieces

Sustainable and maintable luminaires

- As a designer and manufacturer, Sammode is fully commited to providing long-term, reliable solutions with durable and upgradable luminaires.

- Light sources, electronic circuit and mechanical structure: each component is designed to last and can be replaced.
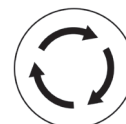
# A complete range of lighting solutions for refrigeration industry

Blast freezing tunnels and deep freezing process zone: Bering 100

- Weak volume and installation flexibility

- High resistance to impacts and vibrations

- Perfectly suitable for intensive cleaning processes

- 8-year guarantee in intensive use, 24-hour/7-day

Storage warehouses, cold rooms: Bering 133

- Idela for cold room general lighting up to 7 meters

- Large choice of powers and sizes of luminaires to optimise the number of lights and consumption.

- Up to 80% energy saving compare to a fluorescent solution and 100% of the luminous flux when switched on

- 8-year guarantee in intensive use, 24-hour/7-day
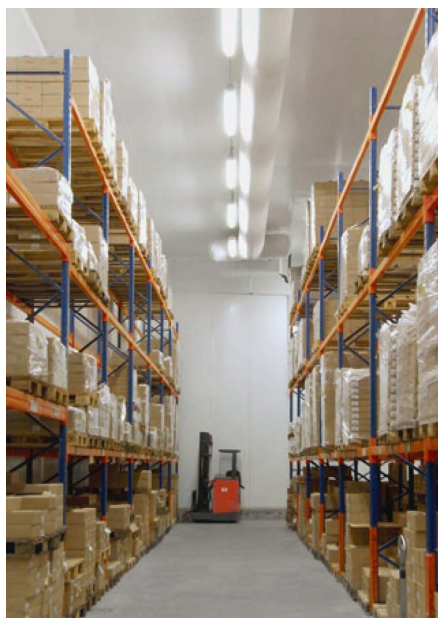
High heights, shelvings: Barents

- Light ouput of 14 000 lumen

- Intensive linear lens

- 8-year guarantee in intensive use, 24-hour/7-day

- A powerful and efficient solution for lighting shelvings

Sustainable lighting

As each areas of your process is specific, we provide you with solutions according to your requirements.

Temperatures	Environments	Solutions
General lighting		
down to -40°C	Cold processes Deep-freezing	Bering 100
	Cold rooms Up to 7 meters	Bering 133
	Cold rooms Shelvings from 7 to 15 meters high	Barents 133
down to -60°C	Very low temperature areas	Celsius 70
Emergency lighting		
down to -20°C	Low temperature areas	Maxwell LSC
down to -60°C	Very low temperature areas	Maxwell LSC BT

BARENTS

Technology	LED
Max. temp.	As low as -40°C
Light output	13700 lm
Beam	Elliptical
Height	7 to 15 m
Power supply	Industrial lighting

1850   80

Variable distance

158

Ø133
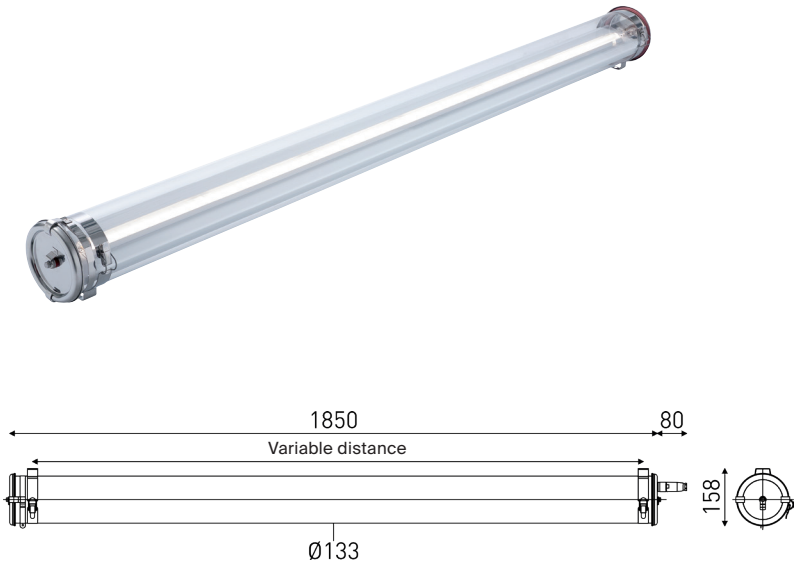
Key features

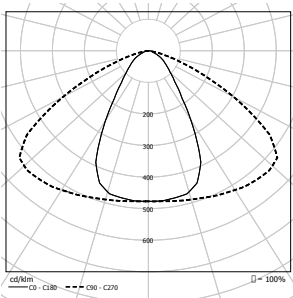| Plug & Play installation by disconnectable plug |
|---|
| Suitable for use in industrial environments |
| Optics suited to lighting high spaces with shelves and cold storage |
| Durable and maintainable luminaire |

LED · SCREW+ · ULTIMATE 8 YEARS GUARANTEE · CEE INDI BA 116 RES EC 104

Specifications

Light output* (lm)	Designation	Code	P (W)	T (K)	L (mm)
13700	BAR133 16H840 POME PS3 BRS	3210 0020	115	4000	1850

Options

	Code
Colour temperature	
5000 K	850
Finishings	
Stainless steel 316 L	MR

Accessories

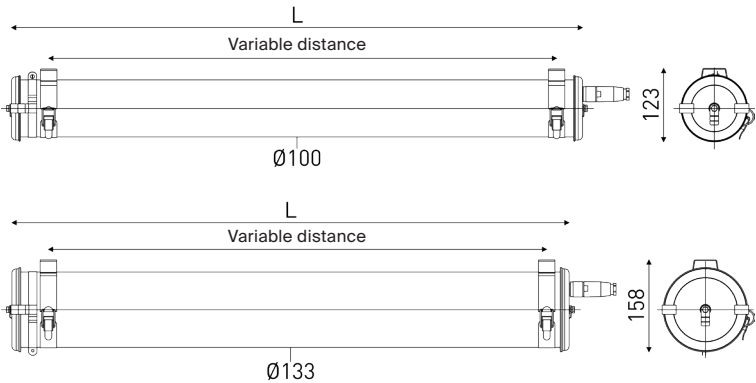| Extension kit for APSAD compliance |
|---|

Specifications

Technical data	
Light source	High-efficiency LED modules Reinforced light output LED modules 70,000 h L80/B50 at max. operating temperature CRI > 80
Optics	High-intensity linear lens (elliptical) for lighting high spaces
Heat management	Aluminium heat sink
Control gear	Robust industrial-lighting electronic driver (non-dimmable) Resistance to voltage surge: 320 V AC, 48 h Supports voltage peaks < 4kV
Power supply	220-240 V 50/60 Hz and 176-280 V DC Compatible with central source
Electrical class	Class I
Operating temperature	-40°C to +25°C
Cable entry	Disconnectable plug for Ø 8 to 10 mm cable (3 × 1.5 mm²)
Fixing	2 reinforced stainless steel fixing straps with spring clip
Method of construction	One-piece housing with reinforced ingress protection Long-lasting ingress protection thanks to axial screw fitting
Materials	
Housing	Food industry polycarbonate housing protected by a coextruded PMMA layer
End caps, fixing straps	Stainless steel 304 L
Gaskets	Silicone
Standards	
Ingress protection	IP66, IP68 and IP69K
Shock resistance	IK10
Fire resistance	650°C
Vibration resistance	Meets the severe application requirements of standard EN 60598-1 (tested according to IEC 60068-2-6)

Photometry

cd/klm C0 - C180 --- C90 - C270 ⊥ = 100%

BERING

Technology	LED
Temperature	As low as -40 °C
Light output	1850 to 11100 lm

Key features

Plug & Play installation by disconnectable plug
Supports repeated on/off switching
Suited to lighting large areas
Durable and maintainable luminaire

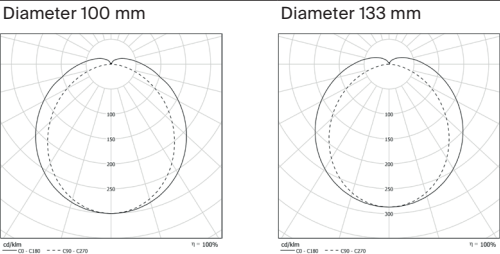LED · SCREW + · 8 YEARS ULTIMATE GUARANTEE · CEE INDI BA 116 RES EC 104

L — Variable distance — Ø100 — 123

L — Variable distance — Ø133 — 158

Options

Control gears	Code	Ø100mm	Ø133mm
Switch-off warning function (for detector/timer)	RC	●	●
Integrated presence detector (length increased by 85mm)	IS	●	●
Colour temperature			
3000 K	830	●	●
5000 K	850	●	●
Finishings			
End caps and fixing straps in stainless steel 316 L	MR	●	●

● Compatible ○ On request − Incompatible

Accessories

	Ø100mm	Ø133mm
Extension kit (5 or 20 cm) for compliance (APSAD)	●	●
IP68 4-outlet junction box	●	●
Offset fixings	●	●

Photometry

Diameter 100 mm

cd/klm — C0 - C180 --- C90 - C270 — η : 100%

Diameter 133 mm

cd/klm — C0 - C180 --- C90 - C270 — η : 100%

Main references

Diameter 100 mm

Light output* (lm)	Designation	Code	P (W)	T (K)	L (mm)
1850	BER100 12H840 POME PS3 SA BRS	1560 5021	16	4000	697
2775	BER100 13H840 POME PS3 SA BRS	1560 5022	22		1007
3700	BER100 14H840 POME PS3 SA BRS	1560 5025	29		1307
4625	BER100 15H840 POME PS3 SA BRS	1560 5026	35		1607
5550	BER100 16H840 POME PS3 SA BRS	1560 5029	40		1850

Diameter 133 mm

Light output* (lm)	Designation	Code	P (W)	T (K)	L (mm)
5550	BER133 23H840 POME PS3 SA BRS	1660 5015	43	4000	987
7400	BER133 24H840 POME PS3 SA BRS	1660 5018	56		1287
9250	BER133 25H840 POME PS3 SA BRS	1660 5019	71		1587
11100	BER133 26H840 POME PS3 SA BRS	1660 5022	85		1850

* Light output of the luminaire

Specifications

| Technical data	
Light source	High-efficiency LED driver and modules 70,000 h L80/B10 at max. operating temperature CRI > 80
Optics	Special LED satin diffuser
Heat management	Aluminium heat sink
Control gear	Constant current driver (non-dimmable)
Power supply	220-240 V 50/60 Hz and 176-276 V DC Compatible with central source
Electrical class	Class I
Operating temperature	-40°C to +25°C
Connection	Disconnectable plug for Ø 8 to 10 mm cable (3 × 1.5 mm²)
Fixing	2 reinforced stainless steel fixing straps with spring clip
Method of construction	One-piece housing with reinforced ingress protection Long-lasting ingress protection thanks to axial screw fitting
Materials	
Housing	Food industry polycarbonate housing protected by a coextruded PMMA layer
End caps, fixing straps	Stainless steel 304 L
Gaskets	Silicone
Standards	
Ingress protection	IP66, IP68, IP69K
Shock resistance	IK10
Fire resistance	650°C
Vibration resistance	Meets the severe application requirements of standard EN 60598-1 (tested according to IEC 60068-2-6)

CELSIUS

Technology	LED
Temperature	As low as -60 °C
Light output	740 to 2515 lm
Power supply	24 V DC

Satin-finish version

High-intensity version

1613
Variable distance
110
Ø 70
90
360°
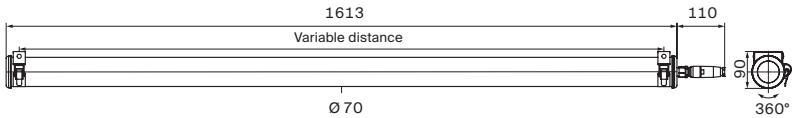
Key features

| Plug & Play installation by disconnectable plug |
|---|
| Optics suited to the operating environment |
| Supports repeated on/off switching |
| Resistant to shocks and vibrations |
| Durable and maintainable luminaire |

LED   EXPAND +   ULTIMATE GUARANTEE 5 YEARS

Options

Finishings

Stainless steel 316 L	MR

Accessories

Extension kit for APSAD compliance

Photometry

Satin-finish versions

cd/klm   C0 - C180   - - - C90 - C270   η = 100%
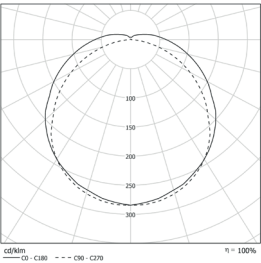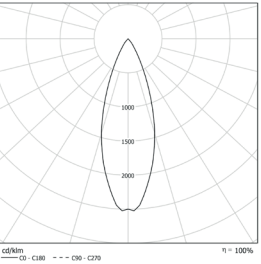
High-intensity version 35° angle

cd/klm   C0 - C180   - - - C90 - C270   η = 100%

Main references

Light output* (lm)	Designation	Code	Consumption (W)	T (K)	L (mm)
Satin-finish version for top-up lighting					
740	CEL70 24DC 2M6 L10 POME PS2 SA	6430 0050	18	4000	613
Satin-finish version for general lighting					
2225	CEL70 24DC 6M6 L10 POME PS2 SA	6430 0060	55		1613
High-intensity version for shelf lighting					
2515	CEL70 24DC 6M6 L10 POME PS2 W	6430 0080	55		1613

* Light output of the luminaire

Specifications

| Technical data	
Light source	Extreme cold LED modules developed by Sammode 50,000 h L80/B10 at max. operating temperature CRI > 80
Optics	Satin-finish version: special LED-rated satin diffuser High-intensity version: special high-performance lenses for shelving
Heat management	Aluminium heat sink
Power supply	24V DC min 26V DC max
Electrical class	Class III
Operating temperature	-60°C to +25°C
Connection	Disconnectable plug for Ø 8 to 10 mm cable (2 × 1.5 mm²)
Fixing	2 stainless steel fixing straps with spring clip and EPDM support pad
Method of construction	One-piece housing with reinforced ingress protection by radial expansion of the seal Closing by tightening the nut on the cable gland
Materials	
Housing	Food industry polycarbonate housing protected by a coextruded PMMA layer
End caps, fixing straps	Stainless steel 304 L
Gaskets	EPDM
Standards	
Ingress protection	IP66, IP68 and IP69K
Shock resistance	IK10
Fire resistance	650°C
Vibration resistance	Meets the severe application requirements of standard EN 60598-1 (tested according to IEC 60068-2-6)

MAXWELL 100 LSC AMB / EVAC

Technology	LED
Temperature	down to -20 °C
Function	Environment / Escape route
Power supply	Central battery
Emergency output	330 lm / 75lm

Environment version

Escape route
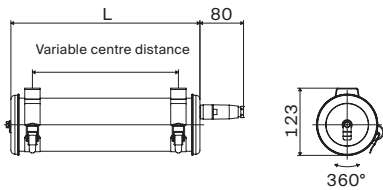
L   80

Variable centre distance

123

360°

Key features

Plug&Play-installation by disconnectable plug
Resists aggressive detergents
Resists impacts
Durable and maintainable luminaire

LED   COMPACT   ULTIMATE 5 YEARS GUARANTEE   NF AEAS / LSC

Options

Finishings

End caps and fixing straps in stainless steel 316 L	MR

Accessories

Spacer kit for APSAD standards	p.14
4-outlet IP68 junction box	p.14

Photométrie

cd/klm
—— C0 - C180   - - - C90 - C270   η = 100%

Principal part numbers

Lumens *	Designation	Part No.	Cons. (W) / (VA)	L (mm)
Compact version				
330	MAX100 LSC AMB SA PS3 BRS	1840 5020	8 / 16	357
Intensive version				
75	MAX100 LSC EVAC SA PS3 BRS	1840 5021	2 / 4	357

* Light output of the luminaire
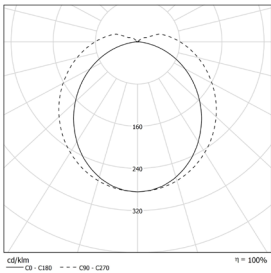
Specifications

Technical data

Light source	Dismantled LED module developed by Sammode
Optic	Optimum light uniformity: LEDs regularly distributed Special LED satin diffuser
Control gear	Constant current output driver
Color temperature	4000K
Power supply	Compact version: central battery 180-254 V 0/50/60 Hz Intensive version: central battery 220-240 V 0/50 Hz
Electrical class	Class I
Operating temperature	-20 °C to +40 °C
Connection	Disconnectable plug Ø cable 8–10 mm (3 × 1,5 mm²)
Fixing	2 reinforced stainless steel fixing straps
Method of Construction	Housing in one piece with high mechanical and chemical resistance Long-lasting imperviousness by axial screw fitting
Materials	
Housing	Polycarbonate
End caps, fixing strap	Stainless steel 304 L
Gaskets	EPDM
Standards	
imperviousness	IP68
Shock resistance	IK10
Fire resistance	960 °C
Compliant with	EN 60598-1, EN 60598-2-22, NFC 71-802 et NF AEAS
Type	Maintained and non-maintained Evacuation version supplied with 3 standardised labels

MAXWELL 100 LSC BT

Technology	LED
Temperature	down to -60 °C
Function	Escape route
Power supply	Central battery 24 V DC
Emergency output	400 lm
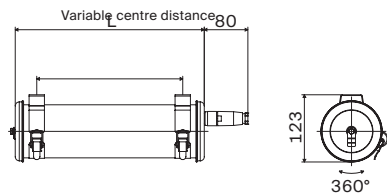
Variable centre distance 80
123
360°

Key features

Plug&Play-installation by disconnectable plug
Resists aggressive detergents
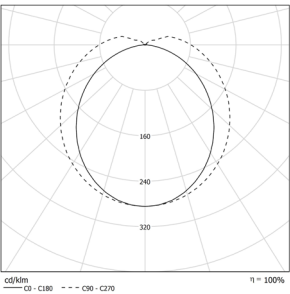Resists impacts
Durable and maintainable luminaire

Options

Finishings

End caps and fixing straps in stainless steel 316 L	MR

Accessories

Spacer kit for APSAD standards	p.14

Photométrie

cd/klm   η = 100%
C0 - C180   C90 - C270

Principal part numbers

Lumens *	Designation	Part No.	Cons. (W) / (VA)	L (mm)
400	MAX100 LSC BT 24DC SA PS2 BRS	1836 5004	10	380

* Light output of the luminaire

Specifications

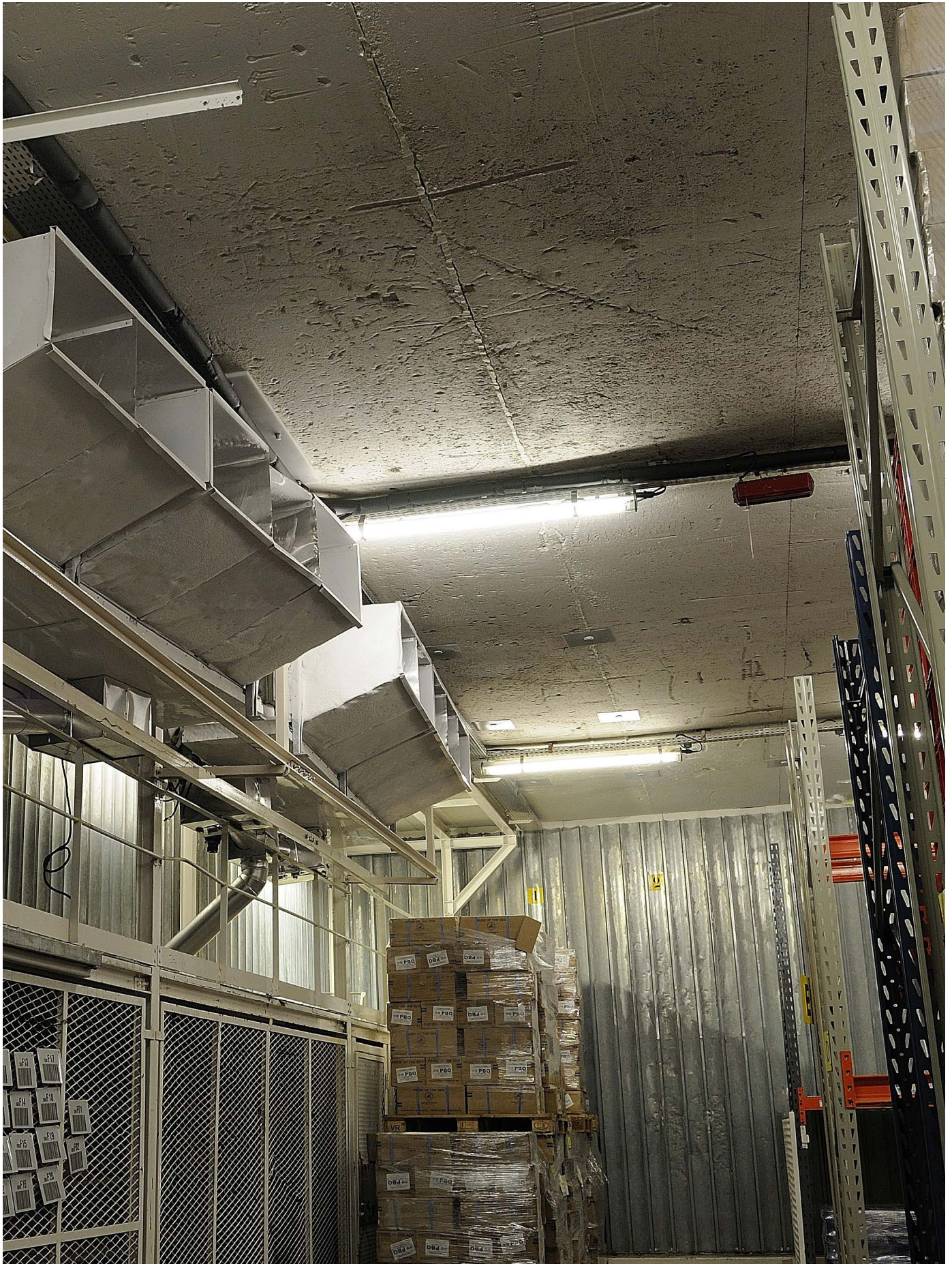| Technical data	
Light source	Very severe cold LED module developed by Sammode
Optic	Optimum light uniformity: LEDs regularly distributed Satin diffuser specially conceived for LED
Heat management	Heatsink in aluminium
Temperature color	4000K
Power supply	Central battery 24 V DC
Electrical class	Class III
Operating temperature	-60 °C to +25 °C
Connection	Disconnectable plug Ø cable 8–10 mm (2 × 1,5 mm²)
Fixing	2 reinforced stainless steel fixing straps
Method of Construction	Housing in one piece with high mechanical and chemical resistance Long-lasting imperviousness by axial screw fitting
Materials	
Housing	Polycarbonate
End caps, fixing straps	Stainless steel 304 L
Gaskets	EPDM
Standards	
Imperviousness	IP68
Shock resistance	IK10
Fire resistance	960 °C
Compliant with	EN 60 598-1, EN 60598-2-22
Type	Maintained and non-maintained Supplied with 3 standardized labels

Options and accessories

Simplifying the mounting, adapting and making an installation safe, Sammode offers all the options ans accessories you need to complete the installation of the luminaire. Spare parts are available for all our luminaires.

Finishings

316L marine grade stainless steekl	Compatibility	Code
• Luminaire external metal components in 316L stainless steel and screws in A4 stainless steel (in the basic option, these are 304L stainless steel, with screws in A2 stainless steel) • Excellent resistance to corrosion by pitting, and specifically recommended for marine applications	All tubular ranges	MR

Accessories

Raised 304L stainless steel strap fixings for ceiling mounting	Compatibility	Code
• Kit of 2 raised 304L stainless steel strap fixings to ceiling-mount luminaires in accordance with the rules set out in technical document APSAP D14-A, i.e. a minimum distance of 20 cm between the equipment and the face of the sandwich panel. • Strap fixing screws included	All tubular ranges	PU44277
Stainless steel 316 L also available		PU47378

Raised 304L stainless steel strap fixings for wall mounting	Compatibility	Code
• Kit of 2 raised 304L stainless steel strap fixings to wall-mount luminaires in accordance with the rules set out in technical document APSAP D14-A, i.e. a minimum distance of 5 cm between the equipment and the face of the sandwich panel. • Strap fixing screws included	All tubular ranges	PU44278
Stainless steel 316 L also available		PU45880

4-outlet IP68 junction box	Compatibility	Code
• High-protection junction box for the connection of between 1 and 3 luminaires • Capacities : – cable diam. 7 to 14 mm • Ingress protection : IP66/IP68 • Materials : – Casing : PA 66 – Cover trim : SEBS – Seals : TPE • Service temperature : -40 °C to +125 °C • Supplied with blanking plugs for unused outlets • Connection terminal not included	All tubular ranges except Celsius et Maxwell LSC BT ranges	CP00674

They trust us:

Ardo France	Häagen Dazs
Ardo Belgium	Institut de Sélection animale
Arrive	Intermarché
Bigard	Kerlys
Bonduelle France	Kermad
Bonduelle Hungary	Labeyrie
Cargill	Lactalis
Cephalon France	LDC
Chr Hansen	Mars Chocolat France
Clauger	Mars Petcare & Food France
Clément Faugier	McCain Alimentaire
Cooperl & Kerméné	Monliz Portugal
Dalian Tianbao Green Foods China	Mydibel
Daniel Dessaint Traiteur	Nestlé Diary Products
Danisco	Nestlé Produits Laitiers
Daregal	Novandie
Davigel	Prolainat
Delmotte	Samifi
Doux Frais	Schwan's France
Farm Frites	Senoble
Farmor	SMO International
Favid	Socopa Meat
Gastronome Falleron	Soparvol Industrie Sevrienne
Gastronome Le Bignon	Stevens Koeltechniek Belgium
GEA Aerofreeze Matal	Unité centrale de production alimentaire hospitalière
GEA Refrigeration France	de St Priest
Gelagri	UFM Surgelés
Nantes St. Nazaire Port	Varachaux
Groupe Arrive	...

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