OCTOLED

LED LIGHTING SYSTEMS FOR COLD STORAGES

www.cantekgroup.com

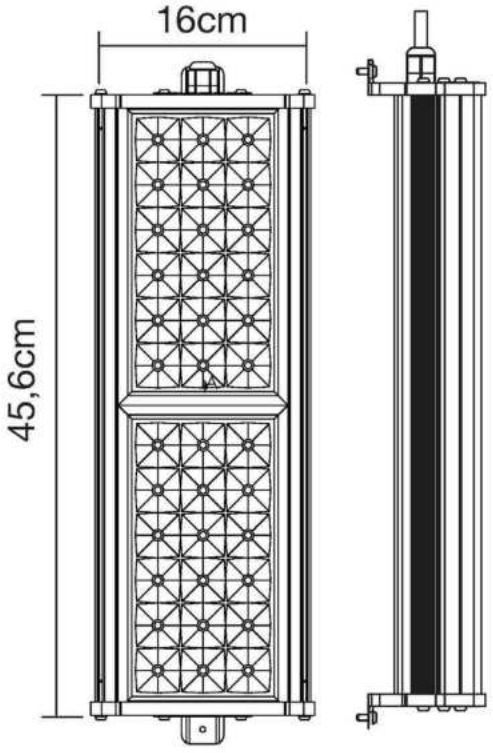
The future light source in cold storage

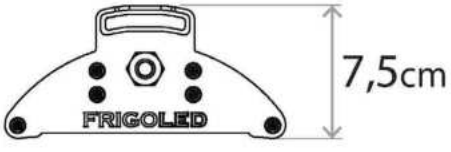
LED lighting is considered to be the greatest revolution in lighting technologies since Edison invented the lamp. LED light bulbs have started to replace commonly used halogen, metal, fluorescent and sodium light bulbs.

LED light bulbs will be the light source of the future owing to their high efficiency, low energy consumption and life cycle up to 50,000 hours.

These devices are based on a semi-conductive technology placed inside a module that is assembled to the surface of a standard lamp body.

What better than a lighting system that can last 8 hours a day for 35 years and, moreover, consumes ten times less electricity than a regular light bulb?





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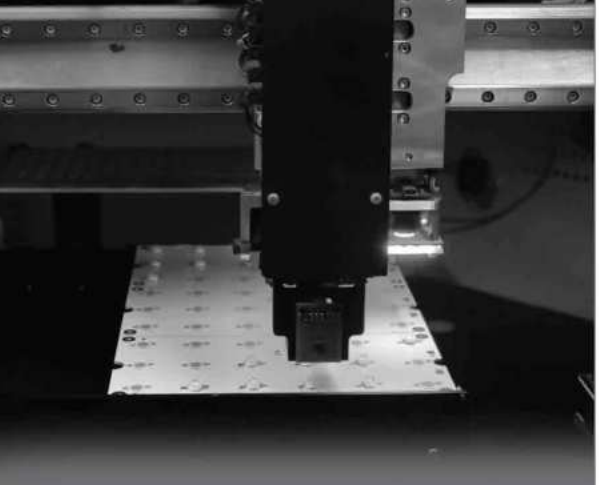
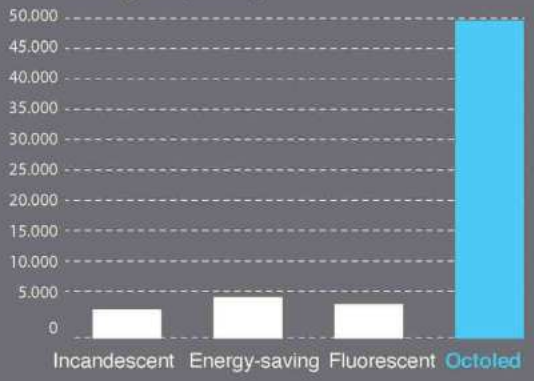


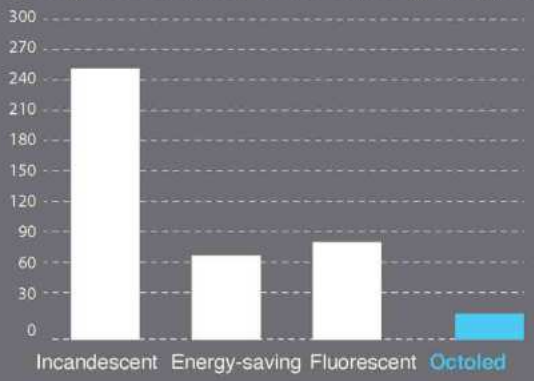
Advantages of octoled lighting

1. Operating life up to 50.000 hours
2. Very low energy consumption. (about 10% of the conventional sources)
3. Can be re-installed to the place of old armatures.
4. Works as soon as it's on.
5. Works directly by means of 220 VAC.
6. Almost does not produce heat.
7. No need for maintenance.
8. IP65 protection class.
9. Shock and vibration resistant. Does not contain fragile elements such as glass, filament
10. Does not include ultraviolet and infrared rays; safer to use for the food sector and light-sensitive materials.
11. There is no heavy metal in its structure such as mercury and halogen so it is an environmental friend
12. Interoperability at temperatures as low as -40°C
13. Suitable for indoor and outdoor use as it can work at dry and wet environments.

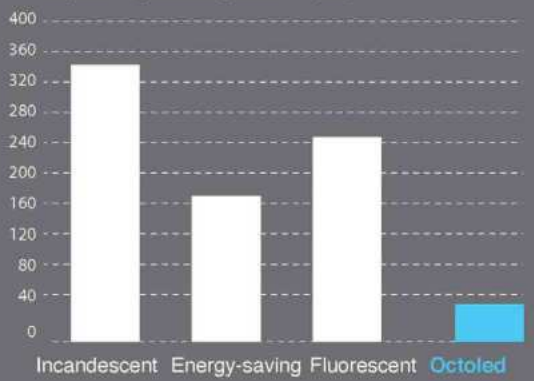
Life cycle (hours)



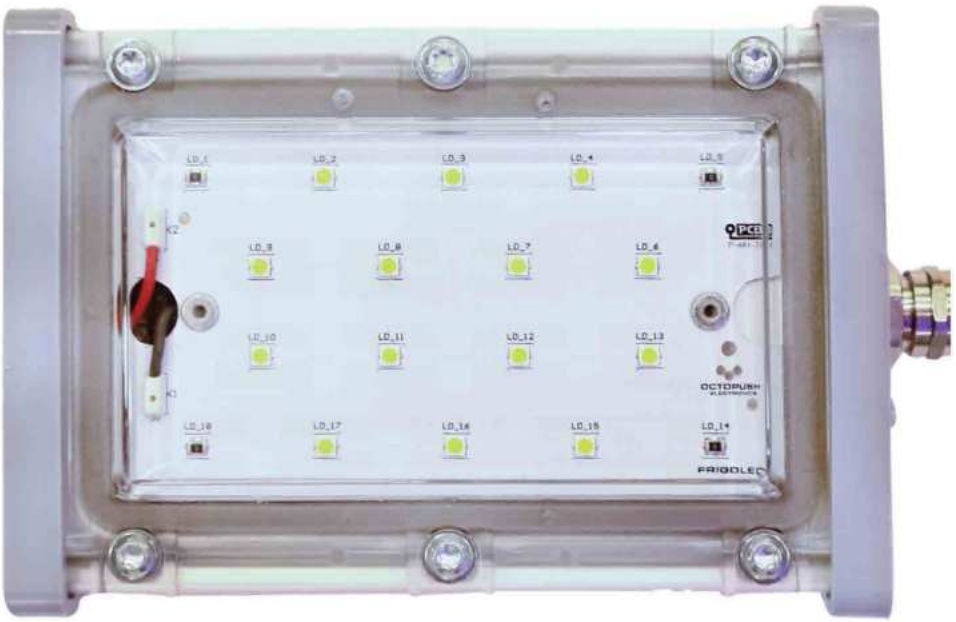
Energy consumption under equal lighting (W)



3-year operating cost * (€)



*6,640 hours



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The effects of the low temperatures on lighting systems

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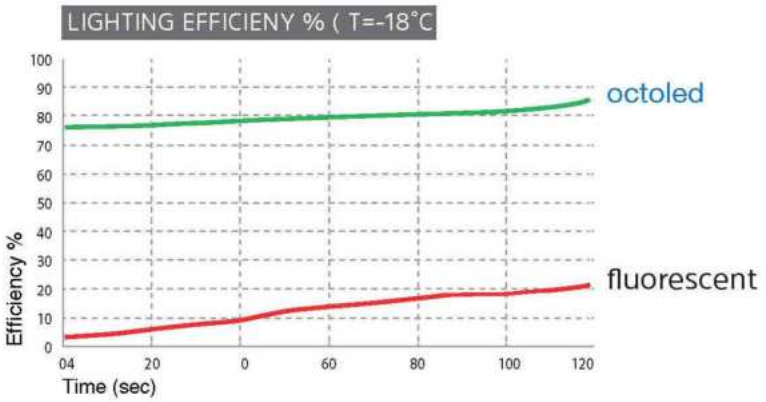
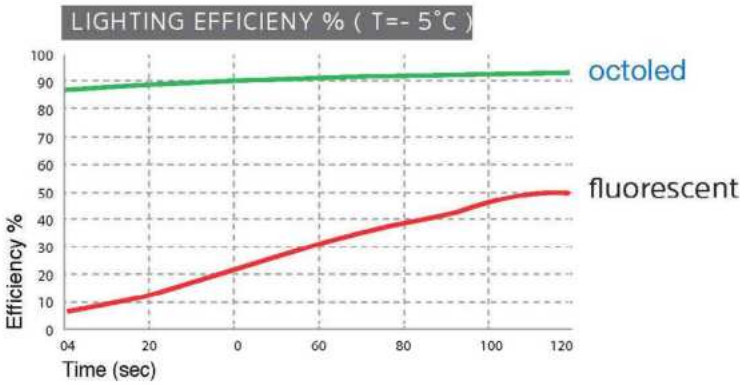
Normal and compact fluorescent lightings (energy saving lamps) used in cold rooms are being replaced by LED armatures.
The most important reason of this replacement is the excessive decline in lighting intensity connected with the decreasing temperature.
In the tests at different temperatures carried out by different refrigeretion firms,it has been obser- ved that the compact fluorescents lose too much lighting intensity compared to LED armatures in cold ambiants.
Tests were carried out at 5°C, -5°C, -18°C and -25°C storage temperatures.
In these tests measured light intensities were accepted as 100 units at normal room tempature.
These values are calculated over 100 lighting unit named as lighting efficiency.
Normal and compact fluorescents lighting efficiency decreases by 10% especially at lower temperatures than 15°C.
A light density has observed in every 10 seconds in 120 seconds time period.
According to the observed results it is obvious that led armatures are more efficient than compact ones.
If the input-output time of the loading goods is accepted average 120 sec to the cold storages; old lighting systems can't reach even the half capacity of LED lighting.





OCTOLED LIGHTING ARMATURE SELECTION TABLES

Product range is the determining factor in the LED lighting applications of the cold storages. While 50 LUX Standard illumniation is recommended for larger products, 100 Lux Good lighting for smaller pieces are recommended.200 Lux Excellent lighting is recommended for very small pieces.

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W18

15.0 W

2239 lm

6000-6500 K

50 Lux STANDART						100 Lux GOOD						200 Lux EXCELLENT					
A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m
20 m²	1	1				20 m²	1	2				20 m²	3	5			
50 m²	1	2	3	3		50 m²	3	5	6	8		50 m²	6	10	12	15	
100 m²		4	6	7		100 m²		6	8	10		100 m²		12	16	18	
250 m²			8	10	12	250 m²			15	20	20	250 m²			30	35	42
500 m²			12	15	16	500 m²			24	25	30	500 m²			48	56	63

A: Area / H: Height

OCTOLED

W36

30.0W

4479 lm

6000-6500 K

50 Lux STANDART						100 Lux GOOD						200 Lux EXCELLENT					
A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m
20 m²			1			20 m²		1	2			20 m²		2	3		
50 m²	1	1	2	2		50 m²		2	3	4		50 m²	3	5	6	8	
100 m²		2	3	3		100 m²		4	5	6		100 m²		7	9	10	
250 m²			4	4	5	250 m²			6	8	10	250 m²			12	18	20
500 m²			5	6	8	500 m²			10	15	20	500 m²			24	25	30

A: Area / H: Height

OCTOLED

W54

45.0W

6718 lm

6000-6500 K

50 Lux STANDART						100 Lux GOOD						200 Lux EXCELLENT					
A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m
20 m²						20 m²						20 m²					
50 m²	1	1	1	1		50 m²	1	2	2	3		50 m²	2	3	4	6	
100 m²		1	2	2		100 m²		2	3	4		100 m²		5	6	7	
250 m²			3	4	4	250 m²			4	5	6	250 m²			4	5	6
500 m²			4	5	6	500 m²			6	8	10	500 m²			6	8	10

A: Area / H: Height

OCTOLED

W72

60.0W

8956 lm

6000-6500 K

50 Lux STANDART						100 Lux GOOD						200 Lux EXCELLENT					
A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m	A↓ →H	2 m	4 m	6 m	7,5 m	9 m
20 m²						20 m²						20 m²					
50 m²	1	1	1	1		50 m²	1	2	2	3		50 m²	2	3	4	6	
100 m²		1	2	2		100 m²		2	3	4		100 m²		4	5	6	
250 m²			2	3	3	250 m²			3	4	5	250 m²			8	10	12
500 m²			2	3	4	500 m²			5	6	8	500 m²			12	15	16

A: Area / H: Height


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INNOVATION IN FOOD SECURITY

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30 years