NORMAGRUP
POCKET
SOLUTIONS

A more natural way to interact with light

saLUZ®

Technology inspired by the sun

NORMALIT
by Normagrup

SaLuz® is the technology from Normalit that creates healthy, comfortable and efficient environments.

SaLuz® luminaires are inspired by the sun to adapt to the biological cycles. **No network or external device connection is required.**

Why some lighting makes us feel good while others create stress?

Light does have an impact on our vital rythms, as well as on our physiological processes, our mood, our capacity to focus, our emotions and of course, our health.

And, even though artificial lighting is quite useful, our biology is still programmed to adapt to natural lighting, to its cycles and its features.

SaLuz® technology is inspired by natural light.

Thanks to its features, luminaires with SaLuz® technology offer important advantages:

- They adapt to our vital natural rythms.
- They prevent damages to eyes and skin.
- They prevent headaches, nausea and dizziness.

How does the SaLuz® technology work?

SaLuz® is a technology that stresses some aspects of the light.

Adapts to the circadian rythm.

SaLuz® modifies the temperature colour of light through the day, to match our natural biological rythms, improving the activation level, the mood and the sleep / awake cycle.

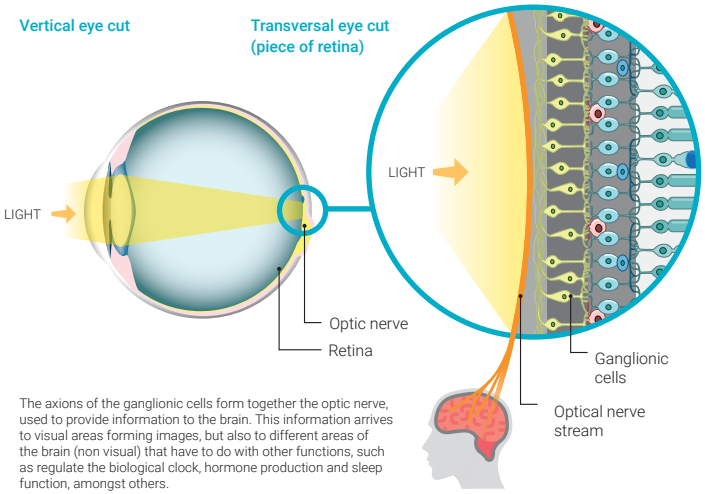
Flickering control (under 8%):

Flickering are small brightness fluctuations in the artificial lighting that can be perceived as blinks. Prolonged exposure to lights with high flickering can cause headaches, even migraines and nausea. SaLuz® guarantees a flickering level under 8%.

Controls the photobiological safety.

Luminaires equipped with SaLuz® technology are considered to be risk free for the eye and the skin, according to the European Norm about photobiological safety (EN 62471).

THE INFLUENCE OF LIGHT IN OUR BRAIN



The axions of the ganglionic cells form together the optic nerve, used to provide information to the brain. This information arrives to visual areas forming images, but also to different areas of the brain (non visual) that have to do with other functions, such as regulate the biological clock, hormone production and sleep function, amongst others.

Light with a high predominance of blue estimulates the ganglionic cells in charge of producing the following hormones:

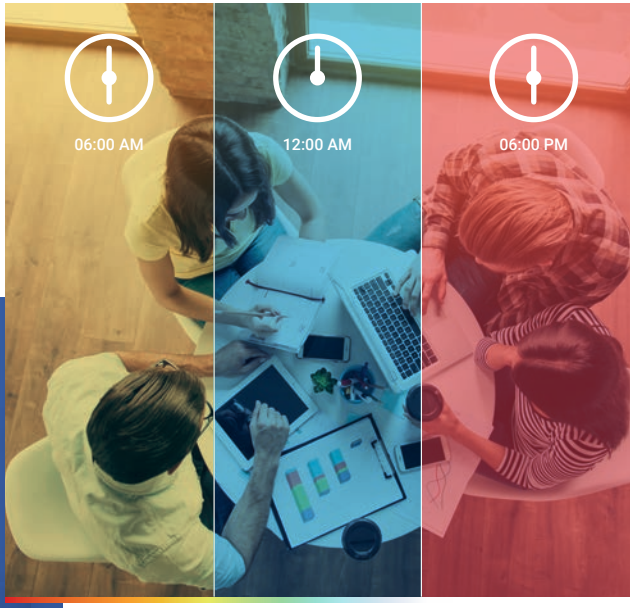
- *Dopamine: involved in the muscular coordination, attention and pleasure.*
- *Serotonine: stimulant and motivator, increasing the levels of energy.*
- *Cortisol: (Stress hormone), stimulates the metabolism and prepares the body for the day.*

This type of light rich in blue content also suppresses the production of melatonine, the hormone that causes tiredness, slows down the activity of the body and reduces activity for a better rest.

Do you know what Circadian Rythm is and how does it affect your life?

People are naturally synchronized with the sun.

In the mornings, the intensity of the light and the proportion of blue light shades help us to be more active. In the evenings, the intensity and the proportion of the blue light shades decreases, which helps us to relax and get ready to rest.



In indoors atmospheres where we usually spend most our our day (offices, schools, etc.), artificial light does not change its tone or its intensity and there is a desynchronization from our vital rythms.

Science has proven that this directly affects our performance, our mood and our sleep.

SaLuz® synchronizes with our natural rhythms and automatically modifies the colour temperature during the day.

SaLuz® luminaires reproduce by themselves the luminic cycle of the sun. To do this, we have considered as a reference the sunrise and sunset of Madrid each day of the year, and this has been associated to a light spectrum for each time of the day. This variation of spectra takes place continuously, but is imperceptible with the naked eye. Out of the day cycle, the luminaires emit a spectrum that has been designed to mimize the melatonine inhibition.

Areas of installation

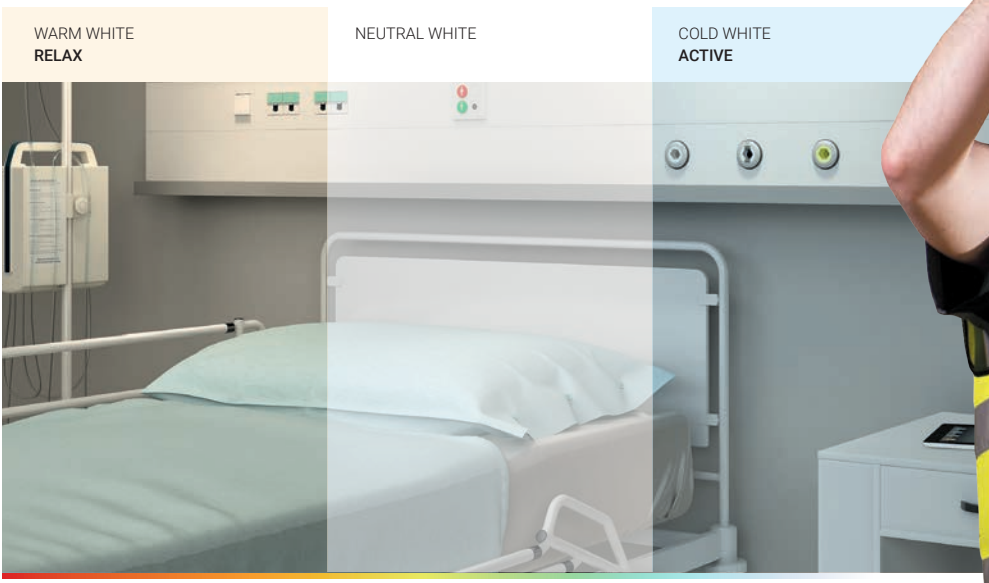
SaLuz® technology has been specially thought for indoor atmospheres where there is a constant artificial light all over the day.

Hospitals

There are patients with a limited movility that have little exposure to natural light and, hence, to the stimulus that help them to synchronize their internal clocks.

SaLuz® technology stabilizes their circadian rythm. It relaxes or activates them as the sunlight would do, according to the time of the day, and also helps them to improve their sleep.

The professionals looking after them will also improve their performance and well-being.



Schools

There are many kids that are subject to a lighting which is not healthy. Even in places where photobiological risks, flickering and UGR have been considered, they are still exposed to an unsuitable and/or constant colour temperature that makes them loose biological rythm.

This affects their attention capacity, alters their coordination, their reaction capacity, etc.

Self-contained and universal luminaires

Ready to mains

Luminaires including SaLuz® technology are the first ones in the market that can symulate circadian cycle without connection to any other fittings.

The luminaire includes a clock and a calendar with the date, the time and the season of the year. It is only necessary to connect it to mains.

Just installation to mains

Without additional wiring
Without control elements
Without commissioning
Without configuration

Automatic synchronization

with the sunlight

Hat HR saLUZ®

Hat HR is a reviewed version of the recessed popular downlight of Normalit. This has a new design keeping the essence of the standard model and achieves a lower glaring.

IP 54

Ceiling mounted

LED

Photobiological risk	0
Flickering	< 8%
UGR	21

Versions

saLUZ® Self-contained

Once the luminaire has been connected to mains, it automously modifies the intensity and the tone of the light all over the day.

saLUZ® Tunable white

COMPATIBLE WITH NORMALINK

This version makes it possible to modify circadian cycles from Normalink in remote, and also to adapt them to the specific needs of the project.

Hat HR saLUZ®

Ceiling
recessed mounted

LED

IP
54

CRI
>80

UGR
21

84º

Expectancy
70000 h.
L70B10

Performance (%)
75,1

Photobiological risk

RG0	0 Exempt from risk
RG1*	Low risk
RG2	Moderate risk
RG3	High risk

* Less than 3 h

Minimum heigth for ceiling installation
94

Cut range
Ø220-225

Ideal cut
Ø215
Round cut

		W	K	LUMEN	COLOR	
LED	**EHI2ZB**	1x20,5W	2700-6500	2600 lm	○	0,8
LED	**EHI2ZG**	1x20,5W	2700-6500	2600 lm	◍	0,8
LED	**EHI2ZN**	1x20,5W	2700-6500	2600 lm	●	0,8
LED	**EHI2TWB**	1x20,5W	2700-6500	2600 lm	○	0,8
LED	**EHI2TWG**	1x20,5W	2700-6500	2600 lm	◍	0,8
LED	**EHI2TWN**	1x20,5W	2700-6500	2600 lm	●	0,8

Installation	Ceiling mounted
Cover	⊗
Light source	LED
Photobiological security	0
UGR	21
CRI	> 80
Macadam elipses	3
Light beam	84
Power (W)	20,5
Colour temperature (ºK)	2700 - 6500
Lumen output	2600
Power factor	0,95
Performance (%)	75,1
Life expectancy	70000 h L70B10
Maintained operation 24h	✓
IP	20-54
Category	II
Ideal cut (mm)	ø 215

⊗ Microprismatic cover

More information on **normalit.com**

Nassel Avant saLUZ®

NASSEL AVANT is a Led panel made with a metal housing and a plastic multi-reflector system that provides a uniform and comfortable lighting in the working area.

IP 44

Ceiling mounted

LED

Photobiological risk	0
Flickering	< 8%
UGR	16

Versions

saLUZ® Self-contained

Once the luminaire has been connected to mains, it automously modifies the intensity and the tone of the light all over the day.

saLUZ® Self-contained +

+ LIGHT SENSOR

Same features as the self-contained version but additionally including a sensor which makes it possible to regulate the amount of light.

saLUZ® Tunable white

COMPATIBLE WITH NORMALINK

This version makes it possible to modify circadian cycles from Normalink in remote, and also to adapt them to the specific needs of the project.

Nassel Avant saluz®

Ceiling
recessed mounted

LED

IP 44

CRI >80 | UGR 16 | 77°

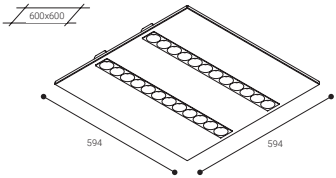
Expectancy
50000 h.
L70B10

Performance (%)
68,75

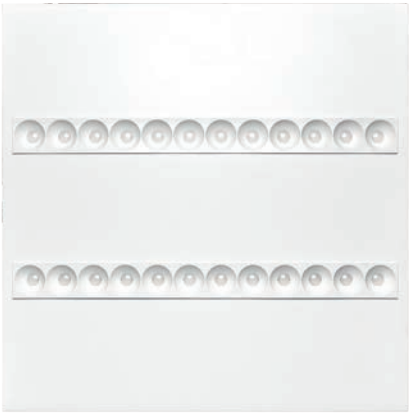
Photobiological risk

RG0	0 Exempt from risk
RG1*	Low risk
RG2	Moderate risk
RG3	High risk

* Less than 3 h



		W	K	LUMEN	COLOR	
LED **NX3ZB**		1x25,9W	2700-6500	3345 lm	○	2,9
LED **NX3ZSB**		1x25,9W	2700-6500	3345 lm	○	2,9
LED **NX3TWB**		1x25,9W	2700-6500	3345 lm	○	2,9



Installation	Ceiling mounted
Cover	●
Light source	LED
Photobiological security	0
UGR	16
CRI	> 80
Macadam elipses	3
Light beam	77
Power (W)	25,9
Colour temperature (ºK)	2700 - 6500
Lumen output	3345
Power factor	0,96
Performance (%)	68,75
Life expectancy	50000 h L70B10
Maintained operation 24h	✓
IP	20-44
Category	II
Ideal cut (mm)	600x600 modular ceiling

● Opal cover

More information on **normalit.com**

Trazzo Avant SaLUZ®

TRAZZO AVANT is a linear system for surface or suspension mounting. Made of extruded alluminium, it is available in 1,125 and 1,685 mm. configurations. It includes a LED multi-reflector system that improves the visual comfort of the luminaire.

IP 30

Ceiling surface mounted

Ceiling suspended

LED

Photobiological risk	0
Flickering	< 8%
UGR	16

Versions

SaLUZ® Self-contained

Once the luminaire has been connected to mains, it automously modifies the intensity and the tone of the light all over the day.

SaLUZ® Tunable white

COMPATIBLE WITH NORMALINK

This version makes it possible to modify circadian cycles from Normalink in remote, and also to adapt them to the specific needs of the project.

Trazzo Avant saluz®

Ceiling surface mounted

Ceiling suspended

LED

IP 30

CRI >80 | UGR 16 | 77°

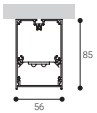
Expectancy: 50000 h. L70B10

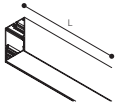
Performance (%): 68,75

Photobiological risk

RG0	0 Exempt from risk
RG1*	Low risk
RG2	Moderate risk
RG3	High risk

* Less than 3 h





		W	K	LUMEN	COLOR	L(mm)	
LED **TX4ZRB**	●	1x22,5W	2700-6500	3170 lm	○	1125	2,5
LED **TX4ZRN**	●	1x22,5W	2700-6500	3170 lm	●	1125	2,5
LED **TX4TWRB**	●	1x22,5W	2700-6500	3170 lm	○	1125	2,5
LED **TX4TWRN**	●	1x22,5W	2700-6500	3170 lm	●	1125	2,5
LED **TX6TWRB**	●	1x33,6W	2700-6500	4750 lm	○	1685	2,5
LED **TX6TWRN**	●	1x33,6W	2700-6500	4750 lm	●	1685	2,5

	Length 1,125 mm.	Length 1,685 mm.
Installation	Ceiling mounted Ceiling suspended	Ceiling mounted Ceiling suspended
Cover	○	○
Light source	LED	LED
Photobiological security	0	0
UGR	16	16
CRI	> 80	> 80
Macadam elipses	3	3
Light beam	77	77
Power (W)	22,5	33,6
Colour temperature (ºK)	2700 - 6500	2700 - 6500
Lumen output	3170	4750
Power factor	0,95	0,95
Performance (%)	68,75	68,75
Life expectancy	50000 h L70B10	50000 h L70B10
Maintained operation 24h	✓	✓
IP	30	30
Category	I	I
Dimensions (mm)	L=1125 (85 heigth x 56 width)	L=1685 (85 heigth x 56 width)

○ Opal cover

More information on **normalit.com**


Normagrup

NORMALIT

Technical and architectural lighting
normalit.com

100%
Diseñado y fabricado íntegramente en España
Entirely designed and manufactured in Spain

More information >
sa-luz.com

SaLuz® Video

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