

Manufacturer and designer of interconnect solutions

**Innovation
High quality
International
Engineering
Reactivity
Manufacturer**

Workshop Session:

LIGHTING APPLICATION

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INPUT / GENERALITY

Coming from:

- Job stream : Installation of exhibition stands / Professional and particular lighting with LEDs.
- Application : To Enlighten underground parkings with LEDs / To connect LEDstrip products.

Needs of customers:

- Connect lighting application :
 - Electroluminescent tape
 - LED strip
 - LED spotlights

Customer requirements:

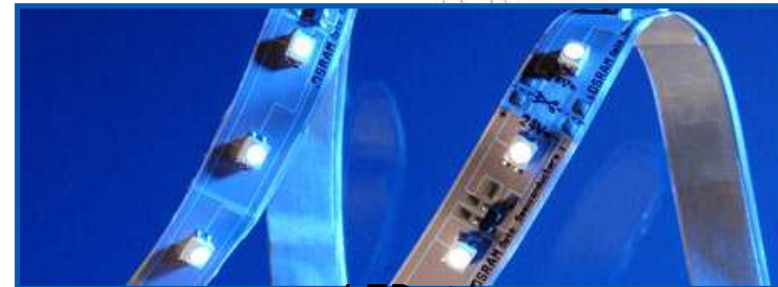
- Time saving to connect the lightning
- Link with crimping cable
- Manual crimping on the field
- Small size and robust
- Locking system

Product use:

- on event booths
- Signboards for security, promotions...
- Interior and exterior decorations
- Dashboards, LED products



Electroluminescent tape.



LED strip.

WAY TO DESIGN

Qualified technology :

- LF CMM contacts to crimp on cable.
- MICROFLEX® technology.
- CRIMPFLEX 1.27mm female contacts.
- Crimping technology.
- Latch technology with CRIMPFLEX housings.

Technology to adapt :

- Male housing, single row **with latch** for on cable contacts.
- Female housing single row for CRIMPFLEX 1.27mm contacts.
- Hand crimp tool.



COMPETITOR



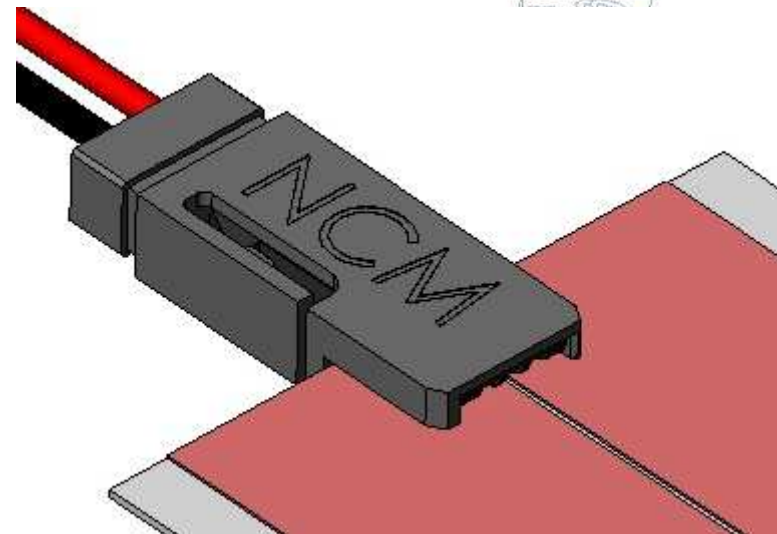
Connection use by LEDPOWER.

LEDPOWER complains of :

- Difficulty to install
- Unexpected unmatting

Competitor :

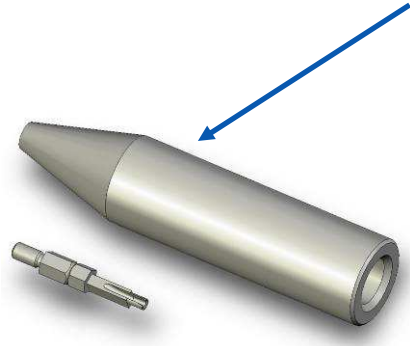
- TYCO
- MOLEX
- AMPHENOL
- ...



NICOMATIC solution

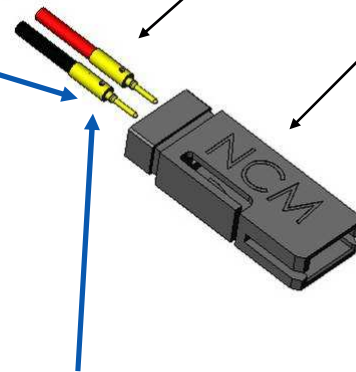
NICOMATIC SOLUTION

Used the C12935 LF contacts insertion tool to insert the 12960 LF contacts in the 16336 housing.



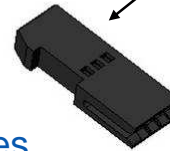
LF contacts insertion tool
Ref : C12935
With body Ref : 13241
And tip Ref : 13712

CMM contact « C » Crimp or solder
Ref : 12960

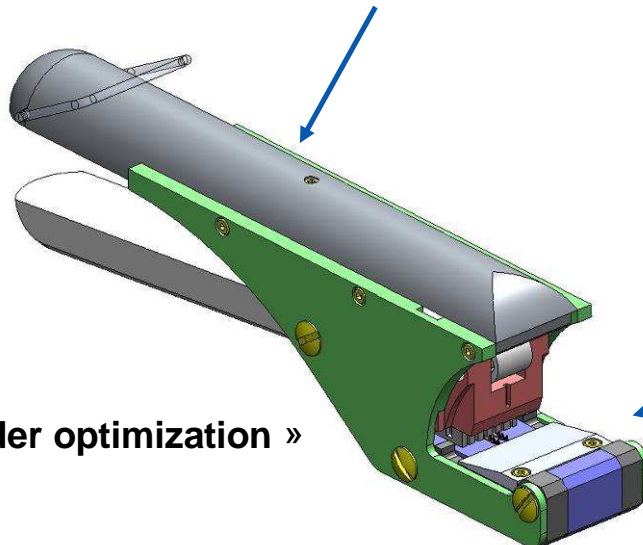


Male single row housing, 2 points.
Ref : 16336

Female single row housing, 2 points.
Ref : 16337

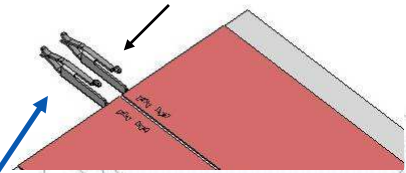


Used the C16331 Crimping tool to crimp the 12960 contacts on cables.



Hand crimp tool « **Under optimization** »
Ref : C16331

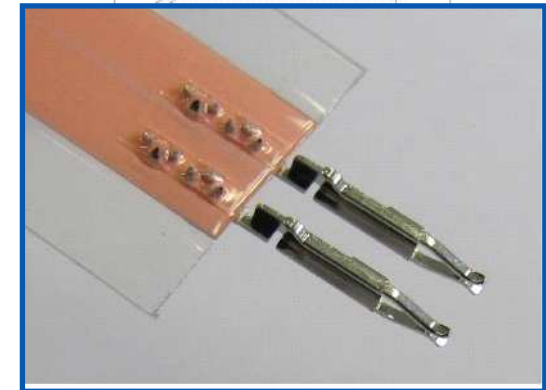
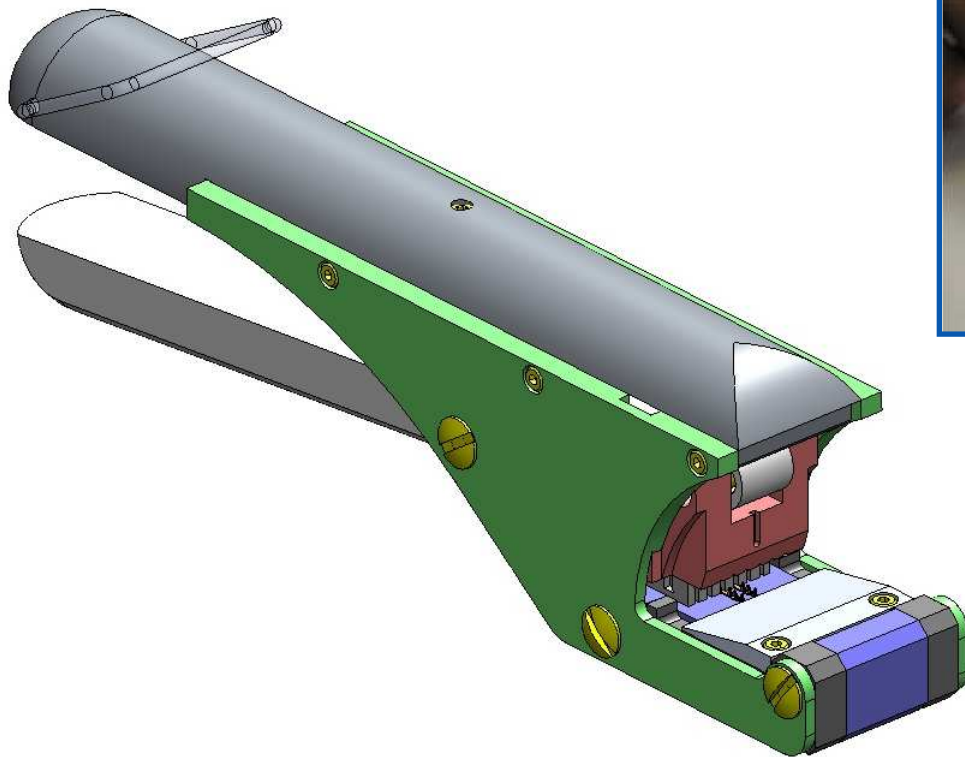
CRIMPFLEX 1.27 pitch,
female contact,
Ref : 16068-YX



Used the C16331 Crimping tool to crimp the 16068-YX contacts on electroluminescent tape.

TECHNICAL DATA

C16331 hand crimp tool “under optimization”.



TECHNICAL DATA

TECHNICALS FEATURES

Material / Plated

LF contacts : Copper alloy / Ni + Au / Ip
 CRIMPFLEX contacts : Phosphor bronze / Tin plated or gold / Au / Ip
 Housings : Thermoplastic with glass fiber Classifié UL 94 V0 stock

ELECTRICAL

- Dielectric withstanding voltage : 500 Vrms
- Rated voltage : 500 Vrms
- Maximum current per contact : 3 A
- Contact resistance : 5 mΩ max. (0.1 in. 50 cycles)
- Insulation resistance : 1200 MΩ hrs min

MECHANICAL for LF Contacts

- Mechanical operations : 500 cycles
- Contact retention in insulator : 15 N min.
- Contact replacement in insulator : 3 cycles

MECHANICAL for CRIMPFLEX Contacts

- Max. mating force per contact : 0.6 N
- Min. unmating force per contact : 0.4 N
- Tensile strength : 50 N
- Retention force : 19 N

ENVIRONMENTAL

- Temperature range : Prot -55°C to +65°C

TECHNICAL SPECIFICATIONS FOR WIRES

- Depending on the wire reference

Locking system.
Used tooling or finger to disconnect

LF contact "C" 12960 to crimp or solder with AWG 22
scale : 3:1

Number of connectors following Amperage			
Amperage (A)	Number of connectors	Colors of the wires	
		Connector N°1	Connector N°2
up to 3	1	Red / Black	
Over 3 to 6	2	Black / Black	Red / Red

XX code corresponding to colors of the wires	
XX code	Colors of the wires
RB	Red / Black
BB	Black / Black
RR	Red / Red

Marking : NCM

EL cable not provided by NICOMATIC

Tools recommended			
LF contacts insertion & withdrawal tool	P/N C12935		
Recommended hand crimp tool	P/N MH800		
Recommended positionner K	P/N C12929		
AWG22 crimp tool setting	Position 6		
Recommended hand crimp tool for CRIMPFLEX contacts	P/N C16331		

LF contacts : Crimping following cable instruction ICLF01
 Crimpflex contacts : Crimping following CRIMPFLEX instruction

 www.nicomatic.com Mail : nicomatic@nicomatic.fr Tel : +33 (0)4.50.36.13.85	b	08/01/10	C.G.		D.Z.
	Iss	Date	Drawn	Checked	Approved
Item : Connection Flexcable jumper to wire, 02 pts					

Folder : X:\Recherche Développement\3_Affaire en etude de faisabilité\NIC0021a (OP10142 connecteur pour VIA lumineire)\C30143-XX_c12

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Catalogue Reference : **C30143-XX**

	General tolerance	±0.2	Scale	3:2	Page	1/1
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TECHNICAL DATA

Advantage :

- Small size (thickness)
- design, esthetic
- Robust
- Same electrical performances as CRIMPFLEX™.
- Crimp on field.
- Locking system

Part Number :

- Connection flexcable jumper to wire, 2pts : C30143-XX
- Hand crimp tool : C16331

Availability :

- 15th of February : Samples are available.
- End of March : Hand crimp tool is available (to buy or to rent, tbc)





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