

新鲜 KEEP IT FRESH

MDL 系列 SERIES





MDL系列满足于商用冷柜照明应用中的苛刻要求。尤其是针对冷冻玻璃门柜，MDL系列提供立式安装单边和中间的组合，横式安装以及CANOPY顶灯的照明选择。MDL系列内不同的多个产品可以完美使其对冷冻冷藏柜的展示提供理想的照明。该产品使用双色挤压透镜技术，能耗低，效果好，是一款经济型的冷柜专用照明灯。

The MDL series meets the most exacting requirements for use in commercial cooling appliances. When it comes to modern glass-fronted cooling appliances in particular, the MDL series offers options for vertical side and central pillar lighting, as well as horizontal shelf and canopy lighting.

The different products in the range mean that they can be perfectly positioned as required in the refrigerated shelving units, thereby providing the ideal lighting for the full display.

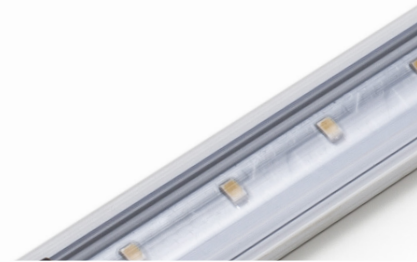
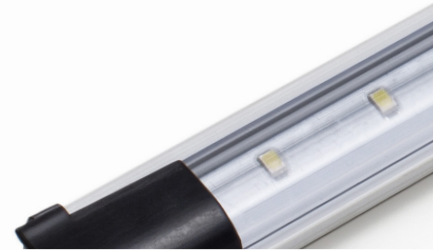
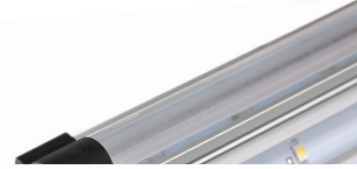
Thanks to the outstanding thermal properties of the products, innovative lens technology and the resultant minimal operational power required, the MDL series is setting new standards in terms of energy efficiency and durability.

能效

最低的能耗，最大的亮度。冷冻食品的展示尤其要求照明产生的热量要小。由于其良好的技术设计，MDL系列的特色就是经济节能。

Energy efficiency

Minimum power, maximum light. Displays of refrigerated food especially require lighting that generates very little heat. Thanks to its excellent technical design, effective self-cooling and low wattage, the MDL series features an extremely efficient energy balance combined with minimum heat generation.





冷却效率



1. 白色的肉纤维和红色的肉蛋白都能够受到均衡的照亮。
2. 有了鲜肉照明灯，就可以逼真的展示肉制品，而不会扭曲产品本身所特有的颜色纹理。

1. White meat fibres and various red shades are all equally overemphasised.

2. With the Fresh meat Light-performance, the meat display is emphasised authentically, without distorting any of the characteristic colour textures of the products.

颜色性能

商品的真实色彩是否被呈现，对客户是否决定购买，起着关键作用，因为真实色彩的商品，更能促客户的购买冲动。

MDL系列使用专业设计的白光给食物提供照明，使各类食物的天然色彩得以真实呈现，不管是肉类，奶酪制品还是盒装乳制品。

MDL灯不会发出任何红外光线。因此，肉制品，奶酪制品和乳制品能更长久的保持鲜美，增添人们的食欲。

Colour performance

Authenticity and targeted emphasis of the different colour spectrums of product groups play a key role in a customer's decision to buy, because the more authentically the product is presented, the stronger the customer's impulse to buy will be.

The MDL series presents food using a specially designed white light with touches of the appropriate colour for the product group, whether it is meat, cheese or packaged dairy products, without looking unnatural.

The lighting strips also do not emit any infrared light. This means that meat, cheese and dairy product displays stay fresh for longer and look much more appetising.



COOLING EFFICIENCY



透镜技术

不管灯光是照在商品的前侧或者后侧，MDL优秀的光学透镜技术，确保灯光强度在整个照明区域保持一致。根据不同柜型需求选择模式，立式左和右、立式中间以及CANOPY顶灯的组合，可以使整个柜体得到完美的照明，不存在所谓的照明暗区。

Lens technology

Directional light with a perfectly customised batwing lens technology, regardless of whether the light is shining on products at the front or the back. The light intensity always remains the same throughout the display.

Thanks to the range of product options for vertical side lighting, vertical central lighting and horizontal shelf and canopy lighting, the unattractive areas of shadow have finally become past.





MDL-T 顶灯

CANOPY TYPE



➤ 最先进的透镜技术确保所有的产品都得到均衡的照明，甚至产品的背面也可以完全照亮。

State-of-the-art lens technology ensures that the products are evenly lit, right to the back of the display.

➤ 最大的节能和最大的光强

Maximum energy efficiency and maximum light intensity

➤ 为冷冻新鲜产品特别设计的颜色性能

Specially designed colour performance for refrigerated fresh goods

➤ 极低的能耗，恰当的照明

Very low energy consumption while providing light in the right place

➤ 持久稳定的热管理

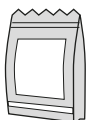
Long-lasting, stable heat management



应用 / Application

在开放式多层冷柜设备，CANOPY顶灯在照亮最上层的同时，另一组灯也以非常窄的发光角度从上而下照亮整个柜体表面。

In open and closed multi-deck refrigerated shelving units, the top shelf is illuminated from the top section of the refrigerated unit and all of the fronts of the shelves below are illuminated at the same time with a specially aligned beam of light.



WARM WHITE
NEUTRAL WHITE
COLD WHITE

灯光色彩 / Lightcolours

MDL系列能使盒装肉制品，奶酪制品和乳制品展示出特别理想的灯光效果，其均衡的照度使地食品的各种纹理色彩得到真实呈现。

The MDL series creates the ideal colour effect for wrapped meat, cheese and displays of dairy products, emphasising and enhancing the various colour textures of the food products equally authentic.

安装附件 / Accessories

采用螺丝安装

Easy mounting through screw.

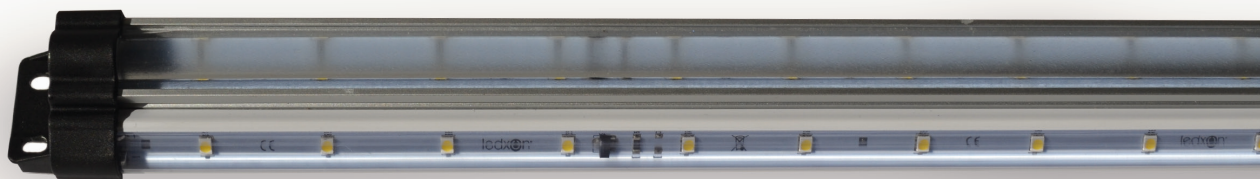
➤ 更多安装附件，请看第44页

For more accessories, see page 44

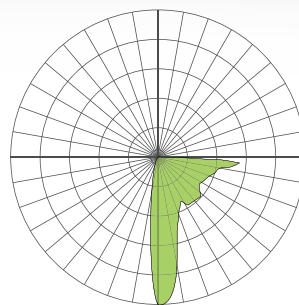


安规标准 / Standards

EN 55015 / EN 61547 / EN 62031-1, A1, A2 / EN 62471-1, A1



MDL-T 系列 Type		
工作电压	Voltage	24 VDC (± 5%)
尺 寸	Length	1200 / 1350 / 1500 / 1700 mm
色 温	Colour temperature	3000 / 4000 / 6500 K / fresh meat
显色指数	Colour rendering	CRI >80 / CRI 85
透镜技术	Lense technology	Canopy lense
LED规格	LED type	SMD 2835 / 3 SDCM
防护等级	Ingress protection	IP54
寿 命	Lifetime	30.000h L80 @ 10°C



MDL-T 系列 TYPE
配光曲线图
Photometric distribution



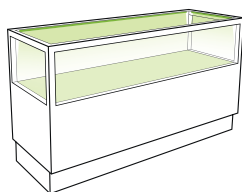
描述	货号	尺寸L1	颜色	色温	流明	功率	显指
Description	Part.-No.	Length L1	Light colour	Colour temp.	Luminance	Power	CRI
MDL T L1200	9100250-1	1200 mm	ww	3000 K	1600 lm	20 W	>80
MDL T L1200	9100251-1	1200 mm	nw	4000 K	1680 lm	20 W	>80
MDL T L1200	9100252-1	1200 mm	cw	6500 K	1680 lm	20 W	>80
MDL T L1350	9100308-1	1350 mm	ww	3000 K	1840 lm	23 W	>80
MDL T L1350	9100309-1	1350 mm	nw	4000 K	1932 lm	23 W	>80
MDL T L1350	9100310-1	1350 mm	cw	6500 K	1932 lm	23 W	>80
MDL T L1500	9100253-1	1500 mm	ww	3000 K	2240 lm	28 W	>80
MDL T L1500	9100254-1	1500 mm	nw	4000 K	2352 lm	28 W	>80
MDL T L1500	9100255-1	1500 mm	cw	6500 K	2352 lm	28 W	>80
MDL T L1700	9100256-1	1700 mm	ww	3000 K	2520 lm	31,5 W	>80
MDL T L1700	9100257-1	1700 mm	nw	4000 K	2646 lm	31,5 W	>80
MDL T L1700	9100258-1	1700 mm	cw	6500 K	2646 lm	31,5 W	>80
MDL T L1200	9100259-1	1200 mm	fresh meat	*	1540 lm	20 W	85
MDL T L1350	9100311-1	1350 mm	fresh meat	*	1771 lm	23 W	85
MDL T L1500	9100260-1	1500 mm	fresh meat	*	2195 lm	28,5 W	85
MDL T L1700	9100261-1	1700 mm	fresh meat	*	2426 lm	31,5 W	85

* outside of blackbody curve



MDL-H 横式安装

HORIZONTAL TYPE



➤ 最先进的透镜技术确保所有的产品都得到均衡的照明，甚至产品的背面也可以完全照亮。

State-of-the-art lens technology ensures that the products are evenly lit, right to the back of the display.

➤ 最大的节能和最大的光强

Maximum energy efficiency and maximum light intensity

➤ 为冷冻新鲜产品特别设计的颜色性能

Specially designed colour performance for refrigerated fresh goods

➤ 极低的能耗，恰当的照明

Very low energy consumption while providing light in the right place

➤ 持久稳定的热管理

Long-lasting, stable heat management

应用 / Application

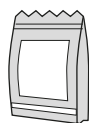
横式安装的MDL灯对多层货架的冷柜以及玻璃面的冷柜提供理想均匀的灯光照明。

The horizontal shelf lighting provides ideal and even lighting for displays in both refrigerated shelving units with multiple levels and glass-fronted cooling appliances.

灯光色彩 / Lightcolours

MDL系列能使盒装的肉制品，奶酪制品和乳制品展示出特别理想的灯光效果，其均衡的照度使地食品的各种纹理色彩得到真实呈现。

The MDL series creates the ideal colour effect for wrapped meat, cheese and displays of dairy products, emphasising and enhancing the various colour textures of the food products equally authentic.



WARM WHITE
NEUTRAL WHITE
COLD WHITE

安装附件 / Accessories

采用螺丝或双面胶

Easy mounting through screw.

➤ 更多安装附件，请看第44页

For more accessories, see page 44

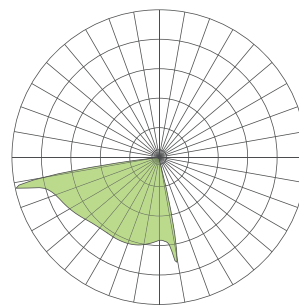


安规标准 / Standards

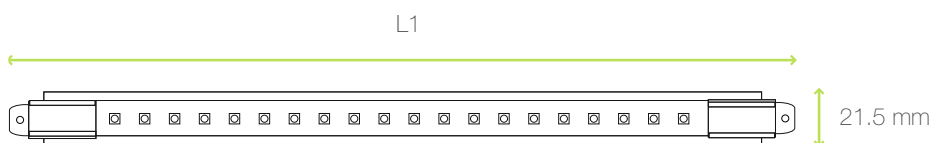
EN 55015 / EN 61547 / EN 62031-1, A1, A2 / EN 62471-1, A1



MDL-H 系列 Type		
工作电压	Voltage	24 VDC (± 5%)
尺 寸	Length	600 / 900 / 1200 / 1500 mm
色 温	Colour temperature	3000 / 4000 / 6500 K / fresh meat
显色指数	Colour rendering	CRI >80 / CRI 85
透镜技术	Lense technology	95° Batwing
LED规格	LED type	SMD 2835 / 3 SDCM
防护等级	Ingress protection	IP54
寿 命	Lifetime	30.000h L80 @ 10°C



MDL-H 系列 TYPE
配光曲线图
Photometric distribution



描述	货号	尺寸L1	颜色	色温	流明	功率	显指
Description	Part.-No.	Length L1	Light colour	Colour temp.	Luminance	Power	CRI
MDL H L600	9100150-1	600 mm	ww	3000 K	460 lm	5,7 W	>80
MDL H L600	9100151-1	600 mm	nw	4000 K	480 lm	5,7 W	>80
MDL H L600	9100152-1	600 mm	cw	6500 K	480 lm	5,7 W	>80
MDL H L900	9100153-1	900 mm	ww	3000 K	690 lm	8,7 W	>80
MDL H L900	9100154-1	900 mm	nw	4000 K	720 lm	8,7 W	>80
MDL H L900	9100155-1	900 mm	cw	6500 K	720 lm	8,7 W	>80
MDL H L1200	9100156-1	1200 mm	ww	3000 K	920 lm	11,5	>80
MDL H L1200	9100157-1	1200 mm	nw	4000 K	965 lm	11,5	>80
MDL H L1200	9100158-1	1200 mm	cw	6500 K	965 lm	11,5	>80
MDL H L1500	9100159-1	1500 mm	ww	3000 K	1150 lm	14,5	>80
MDL H L1500	9100160-1	1500 mm	nw	4000 K	1210 lm	14,5	>80
MDL H L1500	9100161-1	1500 mm	cw	6500 K	1210 lm	14,5	>80
MDL H L600	9100162-1	600 mm	fresh meat	*	390 lm	5,7 W	85
MDL H L900	9100163-1	900 mm	fresh meat	*	610 lm	8,7 W	85
MDL H L1200	9100164-1	1200 mm	fresh meat	*	805 lm	11,5 W	85
MDL H L1500	9100165-1	1500 mm	fresh meat	*	1015 lm	14.5 W	85

* outside of blackbody curve

根据产品公差，参数可能有所变化。保留技术更改。

Technical variations possible, based on production tolerances. Technical changes reserved.



MDL-V-L/R立式安装左/右 TYPE VERTICAL-LEFT/RIGHT



- 最先进的透镜技术确保所有的产品都得到均衡的照明，甚至产品的背面也可以完全照亮。
State-of-the-art lens technology ensures that the products are evenly lit, right to the back of the display.
- 最大的节能和最大的光强
Maximum energy efficiency and maximum light intensity
- 为冷冻新鲜产品特别设计的颜色性能
Specially designed colour performance for refrigerated fresh goods
- 极低的能耗，恰当的照明
Very low energy consumption while providing light in the right place
- 持久稳定的热管理
Long-lasting, stable heat management

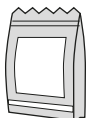
应用 / Application

立式安装的MDL灯均匀地照亮玻璃门柜前面的货架，无刺眼反光。
The vertical positioning of the MDL-V type illuminates the front of the shelf side evenly, without creating any irritating light reflections in the glass door.

灯光色彩 / Lightcolours

MDL系列能使盒装的肉制品，奶酪制品和乳制品的展示出特别理想的灯光效果，其均衡的照度使地食品的各种纹理色彩得到真实呈现。

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WARM WHITE
NEUTRAL WHITE
COLD WHITE

安装附件 / Accessories

采用螺丝或双面胶
Easy mounting through screw.

- 更多安装附件，请看第44页
For more accessories, see page 44

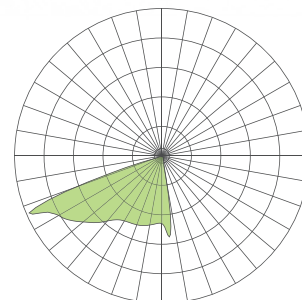


安规标准 / Standards

EN 55015 / EN 61547 / EN 62031-1, A1, A2 / EN 62471-1, A1



MDL-V-L/R 系列 Type		
工作电压	Voltage	24 VDC (± 5%)
尺 寸	Length	1200 / 1350 / 1500 / 1700 mm
色 温	Colour temperature	3000 / 4000 / 6500 K / fresh meat
显色指数	Colour rendering	CRI >80 / CRI 85
透镜技术	Lense technology	60° Batwing
LED规格	LED type	SMD 2835 / 3 SDCM
防护等级	Ingress protection	IP54
寿 命	Lifetime	L1 30.000h L80 @ 10°C



MDL-V-L/R 系列 TYPE
配光曲线图
Photometric distribution



描述	货号	尺寸L1	颜色	色温	流明	功率	显指
Description	Part.-No.	Length L1	Light colour	Colour temp.	Luminance	Power	CRI
MDL VL L1200	9100102-1	1200 mm	ww	3000 K	920 lm	11,5 W	>80
MDL VL L1200	9100103-1	1200 mm	nw	4000 K	965 lm	11,5 W	>80
MDL VL L1200	9100104-1	1200 mm	cw	6500 K	965 lm	11,5 W	>80
MDL VL L1350	9100105-1	1350 mm	ww	3000 K	1100 lm	14 W	>80
MDL VL L1350	9100106-1	1350 mm	nw	4000 K	1150 lm	14 W	>80
MDL VL L1350	9100107-1	1350 mm	cw	6500 K	1150 lm	14 W	>80
MDL VL L1500	9100108-1	1500 mm	ww	3000 K	1280 lm	16 W	>80
MDL VL L1500	9100109-1	1500 mm	nw	4000 K	1340 lm	16 W	>80
MDL VL L1500	9100110-1	1500 mm	cw	6500 K	1340 lm	16 W	>80
MDL VL L1700	9100111-1	1700 mm	ww	3000 K	1480 lm	18,5 W	>80
MDL VL L1700	9100112-1	1700 mm	nw	4000 K	1550 lm	18,5 W	>80
MDL VL L1700	9100113-1	1700 mm	cw	6500 K	1550 lm	18,5 W	>80
MDL VL L1200	9100114-1	1200 mm	fresh meat	*	805 lm	11,5 W	85
MDL VL L1350	9100115-1	1350 mm	fresh meat	*	980 lm	14 W	85
MDL VL L1500	9100116-1	1500 mm	fresh meat	*	1120 lm	16 W	85
MDL VL L1700	9100117-1	1700 mm	fresh meat	*	1295 lm	18,5 W	85
MDL VR L1200	9100118-1	1200 mm	ww	3000 K	920 lm	11,5 W	>80
MDL VR L1200	9100119-1	1200 mm	nw	4000 K	965 lm	11,5 W	>80
MDL VR L1200	9100120-1	1200 mm	cw	6500 K	965 lm	11,5 W	>80
MDL VR L1350	9100121-1	1350 mm	ww	3000 K	1100 lm	14 W	>80
MDL VR L1350	9100122-1	1350 mm	nw	4000 K	1150 lm	14 W	>80
MDL VR L1350	9100123-1	1350 mm	cw	6500 K	1150 lm	14 W	>80
MDL VR L1500	9100124-1	1500 mm	ww	3000 K	1280 lm	16 W	>80
MDL VR L1500	9100125-1	1500 mm	nw	4000 K	1340 lm	16 W	>80
MDL VR L1500	9100126-1	1500 mm	cw	6500 K	1340 lm	16 W	>80
MDL VR L1700	9100127-1	1700 mm	ww	3000 K	1480 lm	18,5 W	>80
MDL VR L1700	9100128-1	1700 mm	nw	4000 K	1550 lm	18,5 W	>80
MDL VR L1700	9100129-1	1700 mm	cw	6500 K	1550 lm	18,5 W	>80
MDL VR L1200	9100130-1	1200 mm	fresh meat	*	805 lm	11,5 W	85
MDL VR L1350	9100131-1	1350 mm	fresh meat	*	980 lm	14 W	85
MDL VR L1500	9100132-1	1500 mm	fresh meat	*	1120 lm	16 W	85
MDL VR L1700	9100133-1	1700 mm	fresh meat	*	1295 lm	18,5 W	85

* outside of blackbody curve

根据产品公差，参数可能有所变化。保留技术更改。

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MDL-V-C 立式安装 中间

VERTICAL CENTER TYPE

- 最先进的透镜技术确保所有的产品都得到均衡的照明，甚至产品的背面也可以完全照亮。
State-of-the-art lens technology ensures that the products are evenly lit, right to the back of the display
- 最大的节能和最大的光强
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Long-lasting, stable heat management



应用 / Application

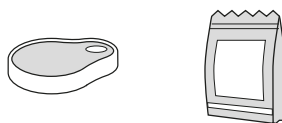
MDL-C可以安装在狭窄的门框上。由于创新的蝠翼透镜技术，灯光可以均匀的照亮货架正面的两侧。

The slimline „Center“ lighting is almost invisible once it is in position, even when the middle bar of the door is particularly narrow. Thanks to innovative batwing lens technology, the light is transferred evenly to both sides of the shelf front.

灯光色彩 / Lightcolours

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WARM WHITE
NEUTRAL WHITE
COLD WHITE

安装附件 / Accessories

采用螺丝或双面胶

Easy mounting through screw.

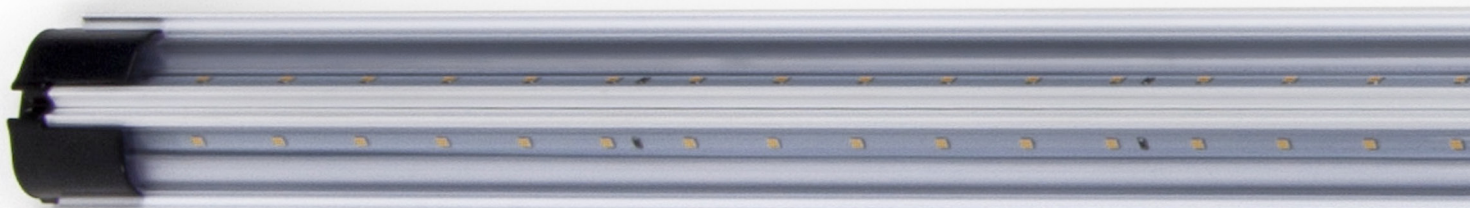
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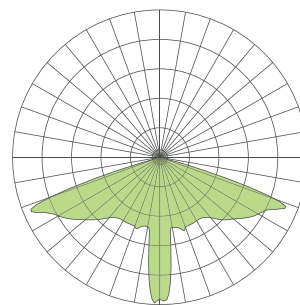


安规标准 / Standards

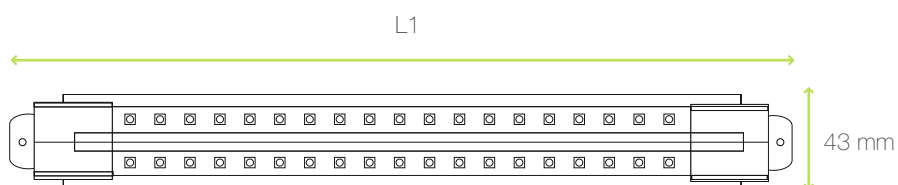
EN 55015 / EN 61547 / EN 62031-1, A1, A2 / EN 62471-1, A1



MDL-V-C 系列 Type		
工作电压	Voltage	24 VDC (± 5%)
尺 寸	Length	1200 / 1350 / 1500 / 1700 mm
色 温	Colour temperature	3000 / 4000 / 6500 K / fresh meat
显色指数	Colour rendering	CRI >80 / CRI 85
透镜技术	Lense technology	60° Batwing
LED规格	LED type	SMD 2835, 3 SDCM
防护等级	Ingress protection	IP54
寿 命	Lifetime	30.000h L80 @ 10°C



MDL-V-C 系列 TYPE
配光曲线图
Photometric distribution



描述	货号	尺寸L1	颜色	色温	流明	功率	显指
Description	Part.-No.	Length L1	Light colour	Colour temp.	Luminance	Power	CRI
MDL VC L1200	9100134-1	1200 mm	ww	3000 K	1840 lm	23 W	>80
MDL VC L1200	9100135-1	1200 mm	nw	4000 K	1930 lm	23 W	>80
MDL VC L1200	9100136-1	1200 mm	cw	6500 K	1930 lm	23 W	>80
MDL VC L1350	9100137-1	1350 mm	ww	3000 K	2200 lm	28 W	>80
MDL VC L1350	9100138-1	1350 mm	nw	4000 K	2300 lm	28 W	>80
MDL VC L1350	9100139-1	1350 mm	cw	6500 K	2300 lm	28 W	>80
MDL VC L1500	9100140-1	1500 mm	ww	3000 K	2560 lm	32 W	>80
MDL VC L1500	9100141-1	1500 mm	nw	4000 K	2680 lm	32 W	>80
MDL VC L1500	9100142-1	1500 mm	cw	6500 K	2680 lm	32 W	>80
MDL VC L1700	9100143-1	1700 mm	ww	3000 K	2960 lm	37 W	>80
MDL VC L1700	9100144-1	1700 mm	nw	4000 K	3100 lm	37 W	>80
MDL VC L1700	9100145-1	1700 mm	cw	6500 K	3100 lm	37 W	>80
MDL VC L1200	9100146-1	1200 mm	fresh meat	*	1610 lm	23 W	85
MDL VC L1350	9100147-1	1350 mm	fresh meat	*	1960 lm	28 W	85
MDL VC L1500	9100148-1	1500 mm	fresh meat	*	2240 lm	32 W	85
MDL VC L1700	9100149-1	1700 mm	fresh meat	*	2590 lm	37 W	85

* outside of blackbody curve