

# LASER SHIELD WINDOW

レーザの危険から作業を守る方策としては、何をにおいても装置本体からのレーザ放射を最小限に抑えることが大切です。特にレーザ加工機では不意に被加工物から反射するレーザで危険にさらされることも充分考えられます。保護きょう体の加工のぞき窓としての利用や管理区域の間仕切り、ドアの一部に開口部を設ける際などさまざまな用途がございます。

As the measure to protect operators from laser risk, it is essential to avoid exposure to laser radiation from laser emitting equipment to a minimal extent first of all. Specially laser processing machines are most likely to cause risk due to an abrupt laser reflection from such processed objects. As far as laser shield window is concerned, there are a variety of applications such as viewing window on the laser processing of the objects enclosed for protection, partition of control area and aperture installation on part of the door.



## YL-500

- サイズ/40cm×40cm(厚さ3mm)  
炭酸ガスのみ厚さ4mm  
※ヤグのみ最大120cm×100cm(厚さ3.5mm)
- 材質/メタクリル樹脂
- 販売単位/上記サイズ範囲内でフリーサイズ
- Size: 40cm x 40cm(thickness 3mm)  
Only for CO<sub>2</sub>, thickness is 4mm.  
Only for Nd-YAG, maximum size is 120cm x 100cm(thickness 3.5mm)
- Material: Polymethyl Meta Acrylate
- Sales Unit: Any size within the above mentioned sizes

### 製品の概要

- アクリル系素材のため正確な寸法加工が可能です。(穴あけ加工を含め指定通りの寸法加工を行います。)

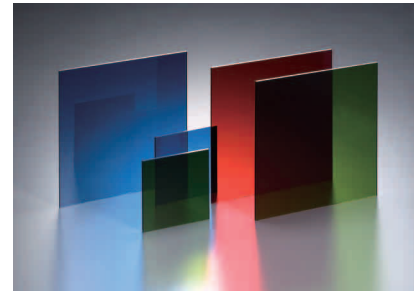
### Outline of product

- Due to acrylic material, an accurate measurement processing is applicable. (We perform any customized measurement processing including perforation processing.)



レーザウインドの取付方法  
穴あけ、寸法カット等が可能ですので、既製の設備に合わせてご使用ください。

Installation method of Laser Shield Window:  
As any perforation and measurement processing is applicable, you can install this product snugly to any ready made equipments.



※レーザウインドを通路窓に使用した例

# LASER SHIELD CURTAIN

レーザ装置は安全の観点から密閉された区域に閉じ込めることが必須とされています。作業領域を外部から隔離する為同じ職場にしながら内部の作業者の状況が確認できないのは保安上好ましいとはいえません。単にレーザ管理区域を設置するのではなく、すべての作業者に安心と安全を提供してこそ、快適な作業環境といえるでしょう。

It is essential to contain laser processors within an enclosed area from safety's point of view. Although you isolate the work area from the outside, the operators at the same work place can not identify the condition of the operators within such enclosed area and this is not advisable from safety's perspective. Not only isolation of laser control area but also offering peace of mind and safety to all of workers will constitute comfortable working environment.



## YL-600

- サイズ/有効幅33cm(厚さ0.7mm)
- 材質/軟質塩化ビニール
- 販売単位/長さ50cm最大1巻き10m
- Size: Effective width 33cm (thickness 0.7mm)
- Material: plasticized polyvinyl chloride
- Sales Unit: Length 50cm, Maximum length 10m per roll  
Size: Effective width 33cm, Thickness 0.7mm  
Unit: 50cm, maximum length available 10 meters

### 製品の概要

- 軟質塩化ビニール製のためハサミなどで簡単に切ることが可能で、既設の設備の大きさに合わせて使用できます。
- 長尺のものもございますので、大きな面積でもお使いいただけます。

### Outline of product:

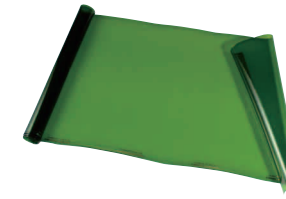
- As this is made of plasticized polyvinyl chloride, you can easily cut CURTAIN by scissors and fit it to the size of any ready made facilities.
- Long length product is available and you can use it for a larger area.



### レーザカーテンの取り付け方法

レーザカーテンは軟質の塩化ビニールを基材としています。それゆえ、柔軟でいろいろな形状に合わせて張り付ける事が出来、目的に応じた使用が可能です。レーザカーテンの性能を十分に発揮させるために右記の取り付け方法、注意点にご留意下さい。

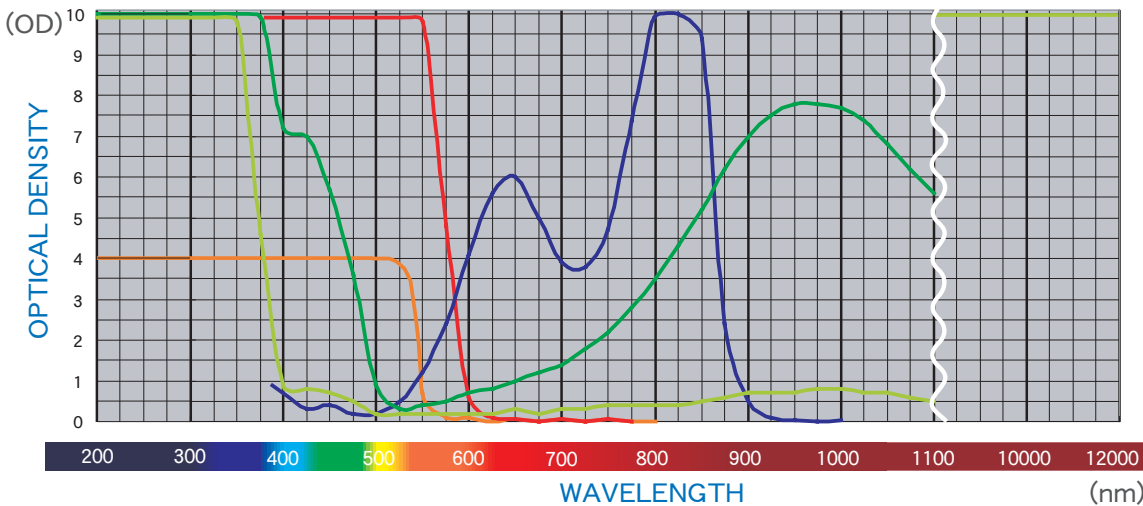
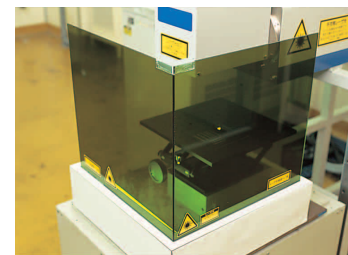
Installation method of laser shield curtain:  
Laser shield curtain is made of plasticized polyvinyl chloride. Therefore, it is soft and flexible, and its installation can be made in any shape according to applications. However, in order to maximize its effectiveness, your attention is drawn to the followings.



## D レーザ光完全吸収タイプ(レーザ光が見えない) Laser absorption type shield curtain YL-600

光学濃度のグラフは測定値であり、規格値ではありませんのでご注意ください。 Please note that optical density graphs are based on measurement values, not based on standard values.

CODE NAME	COLOR / LUMINOUS TRANSMITTANCE	APPLICABLE LASER	WAVELENGTH (nm)	MIN.OPTICAL DENSITY (OD)	MAXIMUM SIZE (mm)	THICKNESS (mm)
ARGON	ORANGE / 60%	EXCIMER	200~514.5	4 <	400×400	3.0
		ARGON He-Cd				
Nd-YAG(SHG)	RED / 15%	ARGON	480~540	6 <	400×400	3.0
		Nd-YAG(SHG)				
LASER DIODE	BLUE / 7%	LASER DIODE He-Ne	632.8, 760~850	5 <	400×400	3.0
Nd-YAG	GREEN / 25%	Nd-YAG	1064	5 <	1200×1000	3.5
CO <sub>2</sub>	GREEN / 60%	CO <sub>2</sub>	10600	10 <	400×400	4.0

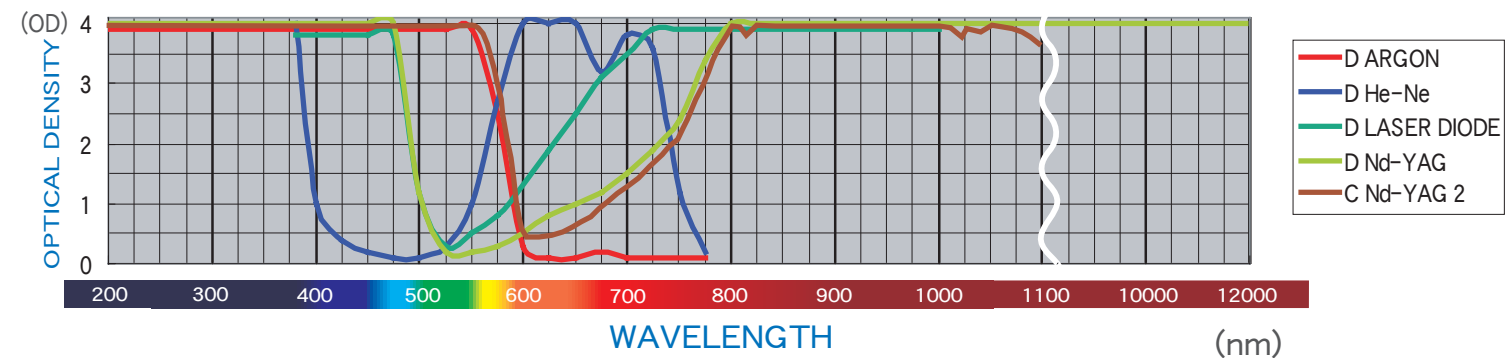


- D ARGON
- D Nd-YAG(SHG)
- D LASER DIODE
- D Nd-YAG
- D CO<sub>2</sub>

## D レーザ光完全吸収タイプ(レーザ光が見えない) Laser absorption type shield curtain YL-600

CODE NAME	COLOR / LUMINOUS TRANSMITTANCE	APPLICABLE LASER	WAVELENGTH (nm)	MIN.OPTICAL DENSITY (OD)
ARGON	RED / 20%	EXCIMER	190~380	3 <
		ARGON	488	
		He-Cd	514.5	
		He-Cd	441.6	
		Nd-YAG(SHG)	532	
		He-Ne	632.8	
He-Ne	BLUE / 12%	(Dye)	570~630	2 <
		GOLD VAPOR	627.8	
			647.1	
		KRYPTON	676.4	
		Ruby	694.3	
		LASER DIODE	740~910	
LASER DIODE	GREEN / 12%	ALEXANDRITE	740~820	3 <
		Ti-SAPPHIRE	700~1000	1~3
		Nd-YAG	1064	3 <
Nd-YAG	GREEN / 30%	CO <sub>2</sub>	10600	3 <

光学濃度のグラフは測定値であり、規格値ではありませんのでご注意ください。 Please note that optical density graphs are based on measurement values, not based on standard values.



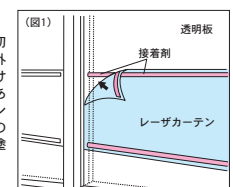
- D ARGON
- D He-Ne
- D LASER DIODE
- D Nd-YAG
- C Nd-YAG 2

## C 多波長兼用タイプ(複数のレーザ光に対応する) Application for Multi bands laser YL-600C

CODE NAME	COLOR / LUMINOUS TRANSMITTANCE	APPLICABLE LASER	WAVELENGTH (nm)	MIN.OPTICAL DENSITY (OD)
Nd-YAG 2	AMBER / 7%	Nd-YAG(FHG)	266	3 <
		Nd-YAG(THG)	355	
		Nd-YAG(SHG)	532	
		Nd-YAG	1064	

### 透明な間仕切り板への装着

塩化ビニール表面の自己粘着を利用して、間仕切り板表面に仮張り付けを行い気泡を外に出します。(気泡は完全には取り除けない場合がありますが品質には影響ありません。)次に張り合わせたカーテンの上端部と下端部約1cm幅位を付属の接着剤(3Mスコッチ多用剤)を両面に塗り張り付け固定します。(図1)



●Installation of Laser Curtain to Transparent Panels  
The surface of LASER CURTAIN is somewhat adhesive. Firstly, place LASER CURTAIN to the panels, then push out air bubbles which may exist between CURTAIN and the panel. Even if air bubbles remain, the effectiveness of CURTAIN does not decline. After that, apply 3M multi-purpose adhesive to the upper/lower edges of both CURTAIN and the panel in approximately 1cm width, and fasten.