



POLYCARBONATE STRUCTURED SHEETS

POLYSIGN

A NEW DESIGN FOR ILLUMINATED SIGNS



POLYGAL[®]



Lighting recommendations

- Use only lamps which have a long life span, and are of known quality and proven reliability.
- Use neutral light color lamps (4000K to 6500K) and "warmer" appearance lamps (2700K to 3000K) for yellow or red colored applications. Only lamps with good color rendering properties can enhance the richness of colorful light signs.
- Use the appropriate ballasts and starters.
- Match the surface luminance of the lamps to the diffusing quality of the POLYSIGN panel.

GENERAL DATA OF FLUORESCENT LAMPS

It is recommended to consult the lamp supplier concerning the following data.

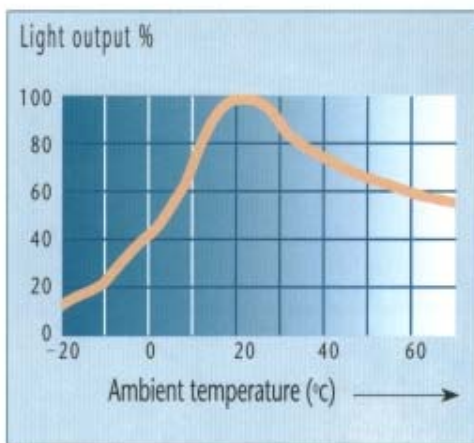
High Efficiency/High Color Rendering (CRI)

Lamps generally available in color types: 2700K, 3000K, 4000K, 6500K

Wattage W	Diameter mm	Length cm	Surface luminance cd/cm ²	CRI	Luminous flux lM	Maintenance (%) 8000 hrs
15	26	45	1.00	85	1000	87
18	26	60	1.05	85	1450	87
23	26	97	0.85	85	2050	87
30	26	90	1.10	85	2400	87
36	26	120	1.10	85	3350	87
36	26	97	1.25	85	3000	87
38	26	105	1.25	85	3200	87
58	26	150	1.35	85	5200	87

LIGHT OUTPUT vs. AMBIENT TEMPERATURE

Ambient temperature influences the light output. At extreme temperatures use more lamps.



High Efficiency/low Color Rendering (CRI)

Lamps generally available in color types: 2900K, 4100K, 6200K.

Wattage W	Diameter mm	Length cm	Surface luminance cd/cm ²	CRI	Luminous flux lM	Maintenance (%) 8000 hrs
15	26	45	0.95	65	950	75
18	26	60	0.80	65	1150	75
23	26	97	0.80	65	1900	75
30	26	90	1.05	65	2300	75
36	26	120	0.95	65	2850	75
36	26	97	1.15	65	2800	75
38	26	105	1.20	65	3100	75
58	26	150	1.25	65	4800	75

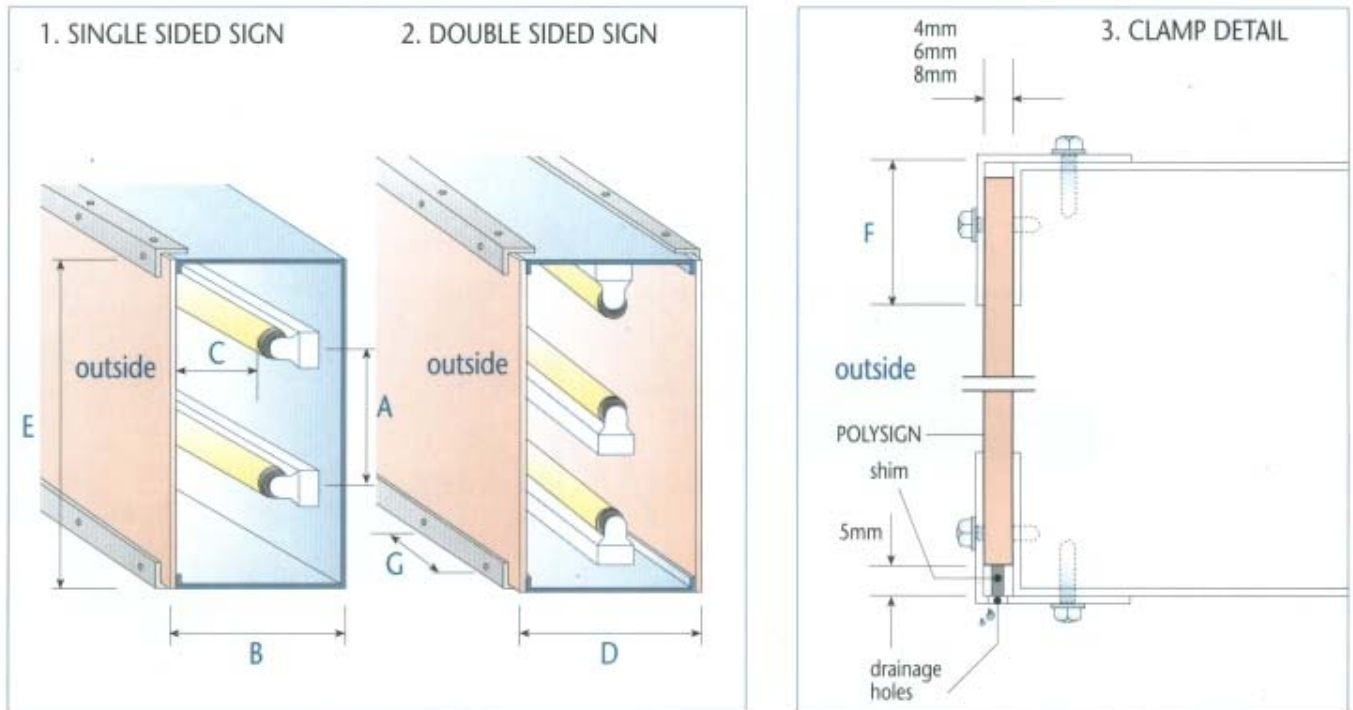
Low Efficiency/low Color Rendering (CRI) low surface Brightness

Wattage W	Diameter mm	Length cm	Surface luminance cd/cm ²	CRI	Luminous flux lM	Maintenance (%) 8000 hrs
20	38	60	0.55	65	1050	77
40	38	120	0.70	65	2700	77
65	38	150	0.80	65	4400	77
30	38	90	0.65	65	1900	77

IMPORTANT NOTE: All the recommendations regarding installation of sign equipment and dimensions are provided as a service to the customer and are based on general knowledge. This information cannot replace professional instructions given by qualified illumination planners, and Polygal cannot be responsible for work which was executed based solely on the general recommendations given in this brochure.

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DETAIL OF LIGHT BOXES



All existing installation design parameters shown in the various POLYGAL leaflets and manuals remain valid for POLYSIGN PCSS. The Solar grade UV protected side must always be installed facing outwards. For more advice and information on installation, contact your nearest POLYGAL Approved Sales Office or POLYGAL Approved Distributor.

RECOMMENDED DIMENSIONS OF LIGHT BOXES

- Distance between lamps (A) should be 30 cm.
- With a single lighted side, box thickness (B) should be 25 cm. In this case, the distance (C) between the lamp and the POLYSIGN panel should be 20 cm.
- With two lighted sides, box thickness (D) should be 33 cm. In this case, the lamp (s) should be placed centrally between the two sides (see detail 2).
- Recommended sheet thicknesses for various sign widths (E) :
Signs of up to 60 cm - POLYSIGN 4 mm sheets.
Signs of up to 120 cm - POLYSIGN 6 mm sheets .
Signs of up to 211.5 cm - POLYSIGN 8 mm sheets .
- The clamp profile rebate (F) should be 30 mm or more.
- The POLYSIGN sheets must be fastened to the frame with screws at intervals of not more than 500 mm (G).

WARRANTY

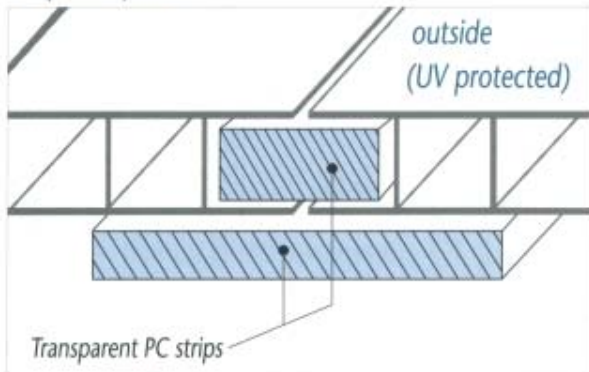
The same 10 year limited warranty that exists for all standard POLYGAL PCSS is valid for POLYSIGN polycarbonate Structured Sheets. POLYGAL offers a 10 year limited warranty on PCSS covering discoloration (yellowing), loss of light transmission and loss of strength due to weathering. See warranty leaflet for more details.

Technical information

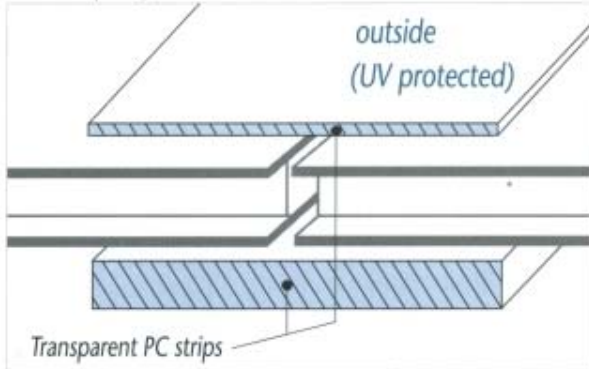
SIDE JOINT AND SUPPORTS FOR MAXIMUM LIGHT TRANSMISSION

Sheets should be joined and supported by bonding with transparent PC strips.

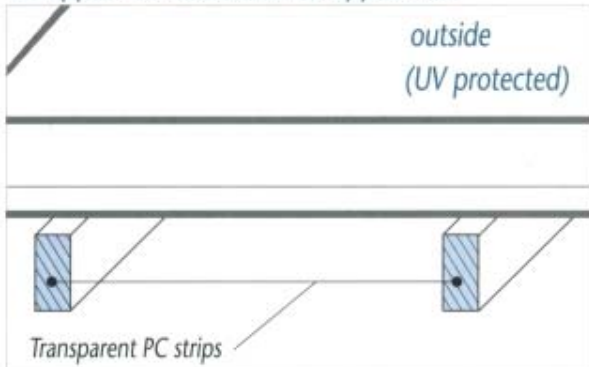
1. Splined joint



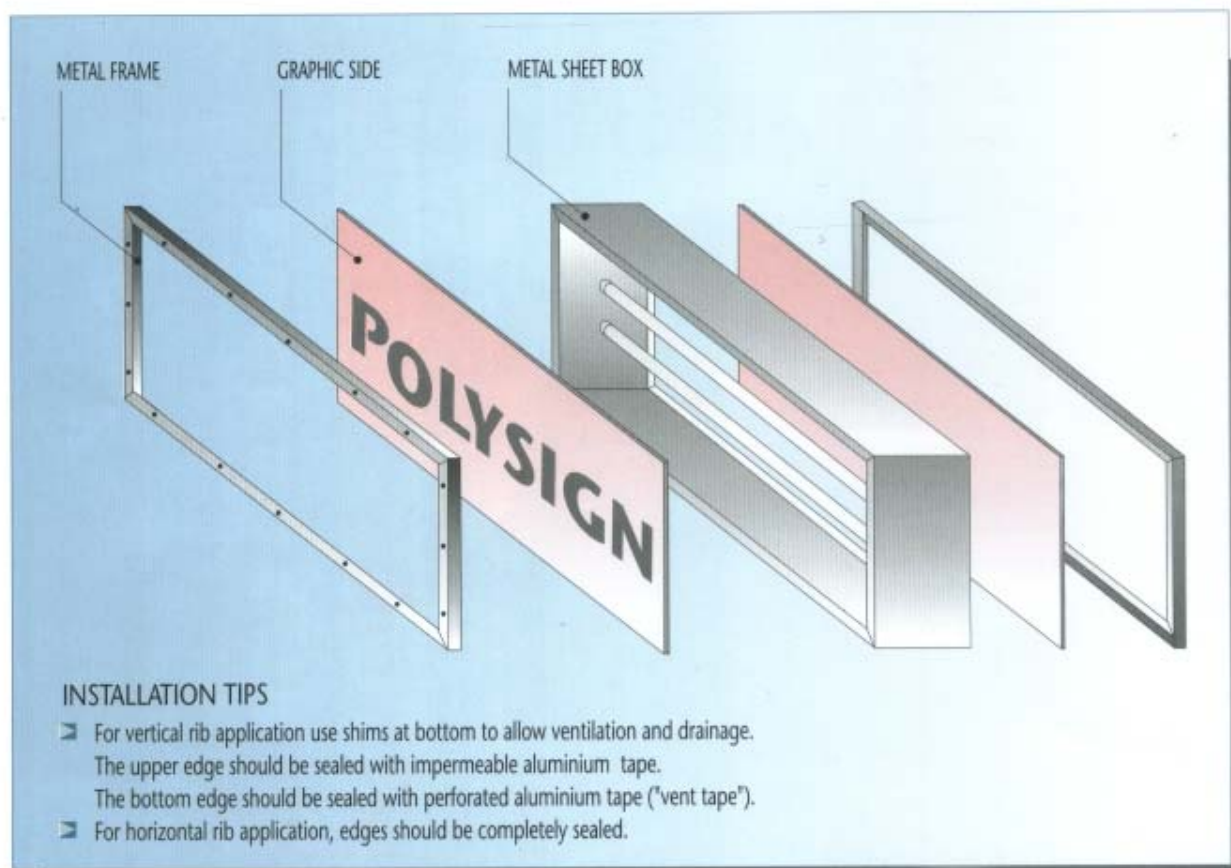
2. Clamped joint



3. Support for horizontal ribs application



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DESIGN SPECIFICATIONS

POLYGAL's high mechanical efficiency is maintained under all weather conditions, as well as being able to withstand solar UV damaging effects and a wide range of temperatures (-40°C to +120°C). POLYSIGN Solar Grade treatment provides an extended service-life compared to that of other materials such as fiberglass, acrylics and PVC.

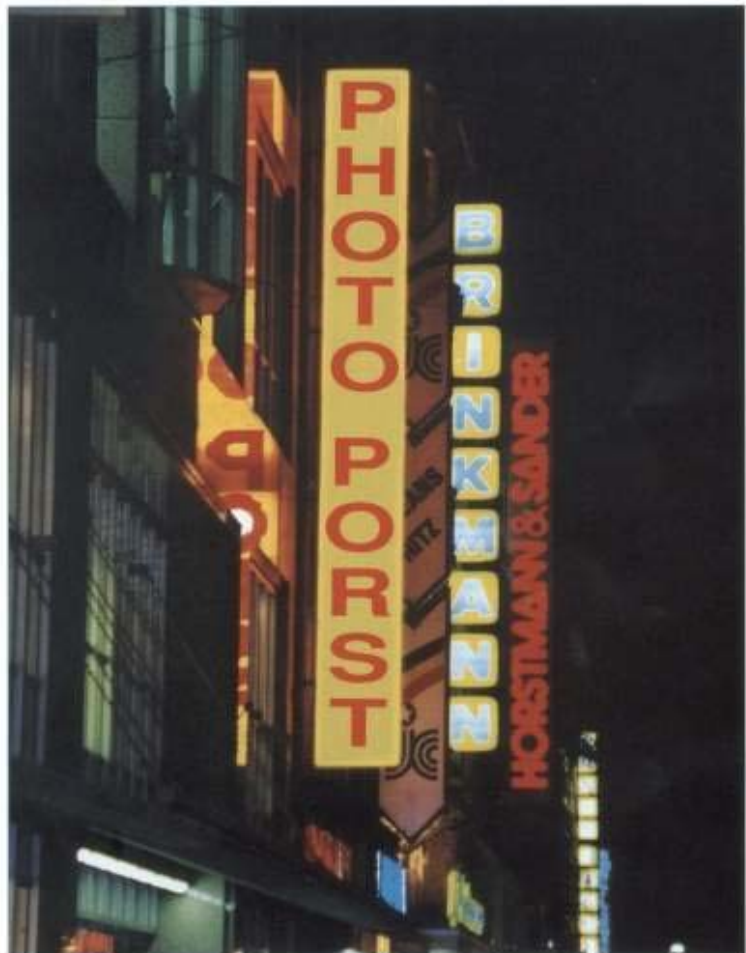
All POLYSIGN PCSS sheets feature a proprietary Solar Grade surface treatment on one side designed to protect the sheet against the degrading effects of ultra-violet radiation in natural sunlight. This side (the graphic side) must always be installed facing outwards.

Sheet thickness (mm)	4	6	8
Standard widths (mm)	904, 1206, 2115		
Maximum length	UNLIMITED (subject to shipping constraints)		
Weight (gr/m ²)	1000	1330	1500
Light transmission (%)	30	28	30
Minimum radius for cold bending (m)	0.7	1.05	1.4

All POLYGAL PCSS can be supplied by prior arrangement in non standard widths, lengths, colors and qualities (anti fog, fire resistance, etc.). Please note: special arrangements may affect prices, warranty terms and other sales conditions.

Advantages

- High impact strength.
- High heat deflection Temperature, as well as durability at very low temperatures.
- Good fire resistance that meets most building regulations worldwide.
- Very light weight.
- Excellent transparency.
- Unaffected by oxidation.
- Unaffected by hydrolysis.
- Limited notch sensitivity.
- UV protected - sheets are hardly affected by aging.
- Practically no limit to length of sheets.
- Easy application and installation.
- Uniform light transmission.
- 10 years warranty.



ADVANCED FEATURES

POLYSIGN sheets have an outstanding appearance and will match all styles of signs, exhibition signs and illuminated panels. It makes the replacement of old sign cladding possible without having to replace the existing framework.

POLYSIGN sheets are the ideal solution for illuminated signs in terms of cost versus quality, and are delivered in thicknesses of 4mm and 6mm. A special 8mm thick sheet is produced for the installation of wider illuminated signs. Polycarbonate sheets offer unlimited application possibilities as well as bending and cold forming capacity.

	POLYSIGN	PMMA	FLEXIBLE SHEET
resistance to BREAKAGE	excellent	poor	poor
resistance to YELLOWING	over 10 years	over 10 years	3-5 years
resistance to UV	very good	excellent	poor
resistance to POLLUTION	very good	very good	poor
resistance to VANDALISM	excellent	poor	average
resistance to HURRICANES	excellent	poor	good
ease of INSTALLATION	good	poor	excellent
ease of CLEANING	excellent	excellent	poor
WEIGHT	light	very heavy	very light

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WHEN THE BEST IS REQUIRED

POLYGAL is well known all over the world for high quality products and for continuous investment in latest technology and design.

For more than 23 years POLYGAL has been developing, producing and marketing a comprehensive range of multi-wall Polycarbonate sheets which successfully cover various types of buildings world over. When you choose one of our products, you are choosing a reliable product that ensures easy application and many years of service.



NO BREAKAGE - NO REPAIR

POLYGAL Polycarbonate Structured Sheets (PCSS) and other products are tough and break-resistant, and POLYSIGN is no exception. In fact, an 8 mm POLYSIGN sheet will withstand an impact of 2.5 joules according to ASTM D5628-95.

LONG LASTING, SUCCESSFUL SIGNS

We are currently adding to POLYGAL's family of high quality products a selection of POLYSIGN sheets developed specially for use in electrically illuminated advertisement signs. POLYSIGN sheets are designed to enable the advertiser to achieve maximum effect from an illuminated sign, are adaptable to almost any form and size, and are useful in many other applications. POLYSIGN sheets veil and conceal the illumination source, are resistant to UV radiation and weather damage, and are practically maintenance free.



POLYGAL®

Polygal Plastics Industries Ltd.

Kibbutz Ramat Hashofet
19238, Israel
Tel: 972-4-959 6222
Fax: 972-4-959 6284
E mail: sales@polygal.co.il
Web site: www.polygal.com

Polygal U.S.A Inc.

1227 Barberry Drive
Janesville, WI 53545
Tel: 1-608-757 1313; 1-800 537 0095
Fax: 1-608-757 1525
E mail: sales@polygalusa.com
Web site: www.polygalusa.com

Polygal U.K.

2 North Crawley Rd.
Newport Pagnell
Milton Keynes, MK18 9HG, U.K
Tel: 44-1908-217 054
Fax: 44-1908-210 942
E mail: polygal@btinternet.com