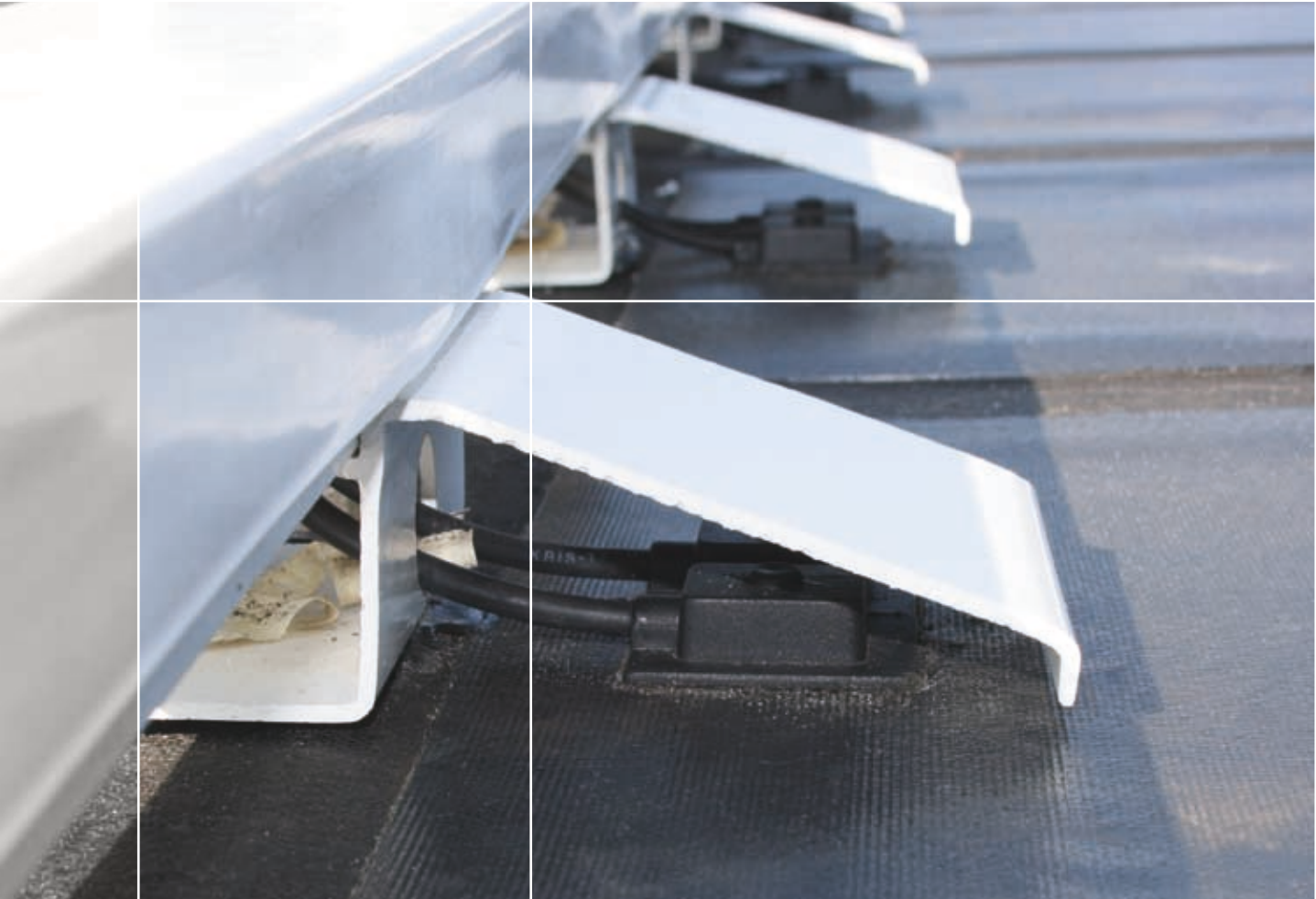


Icosun

A Photovoltaic Flat Roof Solution combining thin-film amorphous-silicon photovoltaic cells with a polyolefine bituminous single-layer waterproofing membrane



- **Architecturally attractive and lightweight solution** meeting all aesthetic concerns
- **Excellent fire-rating:** B Roof (t3)
- **Easy and quick to install PV cells:** bonding by cold-adhesion (peel & stick)
- **Secure installation in 2 steps:**
 - ▶ waterproofing of the roof
 - ▶ then installation of PV cells without damages



Icosun

Icosun Top S

- ▶ UV-resistant compound of the waterproofing membrane
- ▶ Smooth surface: optimum bonding between the PV cells and the membrane
- ▶ High mechanical resistance

Packaging

- Roll of 1 m x 6 m – pallet of 25 rolls
- Roll of 1 m x 11,60 m – pallet of 14 rolls

Description

Single-layer waterproofing membrane in polyolefine modified bitumen without self-finished surfacing.

Main uses

- For low altitude climates.
- Bearing roof elements: concrete & masonry slab, wooden boarding, steeldeck.
- Slope $\geq 3\%$.
- Suitable substrates: a/m bearing elements, rigid thermal insulation, old waterproofing.

Complementary information

Icosun installation manual.

Application

- By torching on Icosun Base FM, underlayer specifically designed to be mechanically-fixed onto concrete & masonry slab, wooden boarding, old waterproofing, non-torchable insulating board (mineral wool board without bitumen surfacing, perlite+fiber board, polyisocyanurate board). See Fig. 1.
- By torching directly onto torchable insulating board (mineral wool board with bitumen surfacing, perlite+fiber board with bitumen surfacing, polyisocyanurate board, foamglass board with bitumen coating). See Fig. 2.

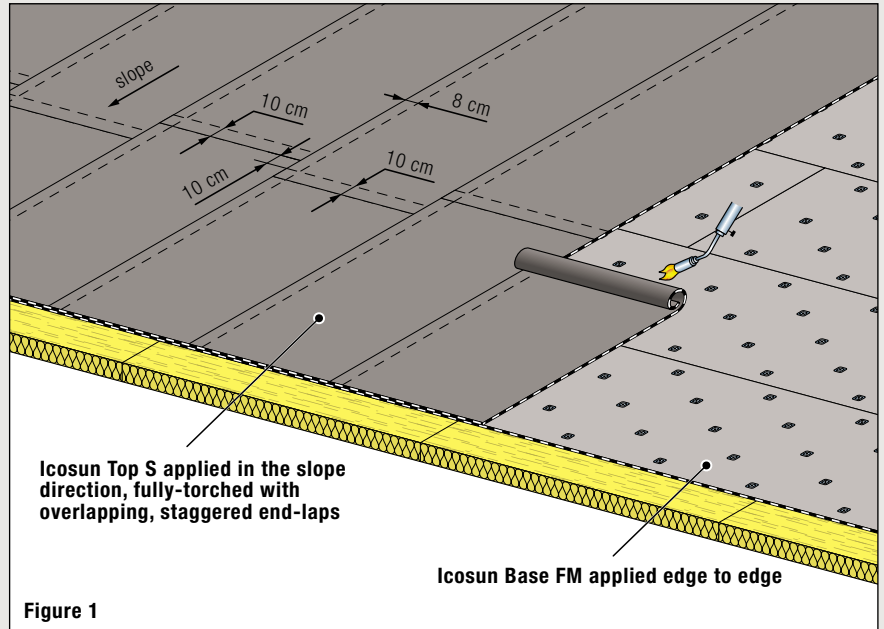


Figure 1

Icosun Base FM: polyolefine bituminous underlayer mechanically-fixed on the whole surface and allowing application over old waterproofing or non-torchable insulating board. Sold separately in 20 m rolls.

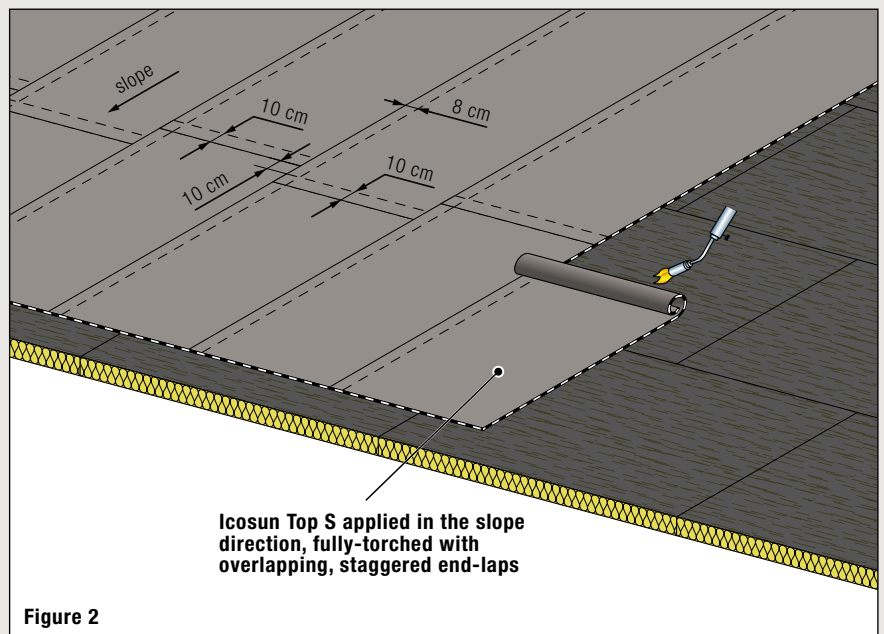


Figure 2



PVL photovoltaic laminate module

▶ Cell laminates suitable for all types of roof-decks, even when partially shaded or soiled

▶ Self-cleaning cells

▶ High energy yield, even in low and diffuse light conditions

Packaging

- PLV 68: cardboard of 20 modules of 0,40m x 2,85m each
- PVL 136: cardboard of 20 modules of 0,40m x 5,50m each
- PVL 144: cardboard of 20 modules of 0,40m x 5,50m each

Description

Module composed of flexible amorphous-silicon photovoltaic cells, using the triple-junction technique from Uni-Solar*.

Application

Application to the Icosun Top S membrane (Fig. 4).

Figure 3: cross-section of the Uni-Solar®-Triple-junction-technology

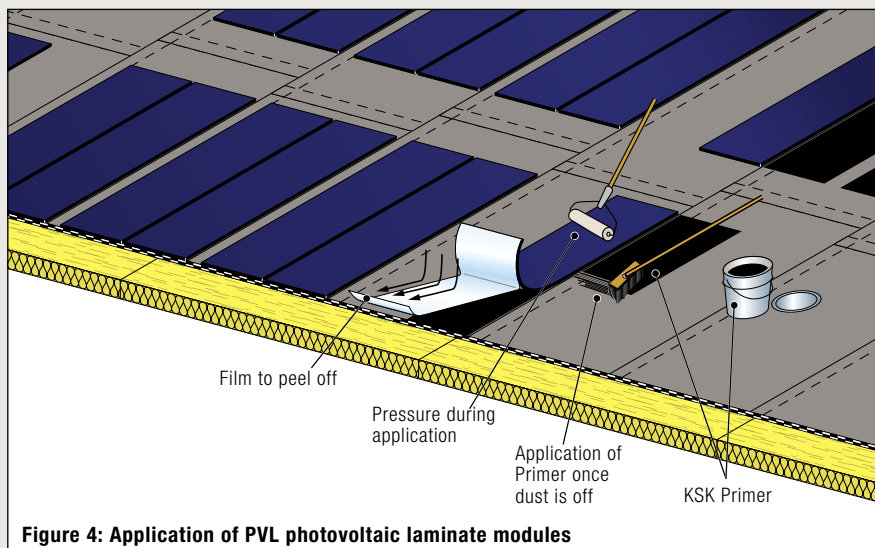
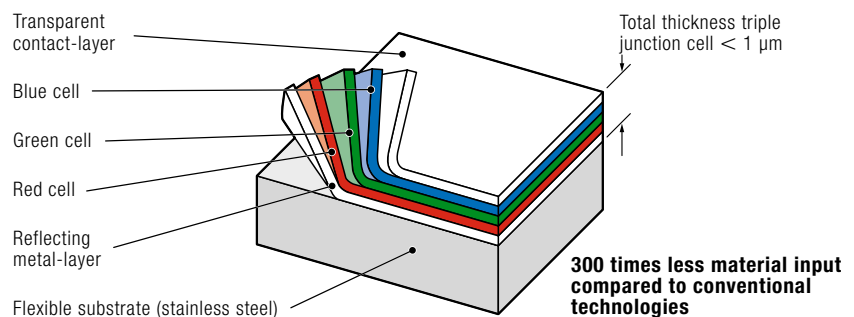
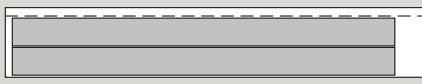



Figure 4: Application of PVL photovoltaic laminate modules

Examples of installation

Type of PVL module	Installation	Operating power	Dimensions of Icosun Top S waterproofing membrane
2 PVL 136 or 2 PVL 144		272 Wc** or 288 Wc*	1 m x 6 m
4 PVL 136 or 4 PVL 144		544 Wc** or 576 Wc*	1 m x 11,60 m

*Laminating of 3 cell-layers – **Measuring unit of the operating power (Watt peak value).

Accessories

■ WM20 Base Channel: supporting base in PVC for raceway, including fins to protect the connect wire terminals.
Sold separately in cardboards of 60 units.

■ WM20 Raceway: extruded PVC wire duct and cover.
Sold separately per 6m length unit.

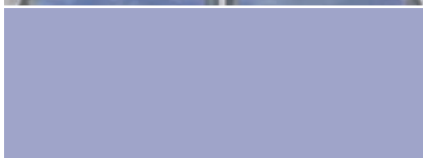
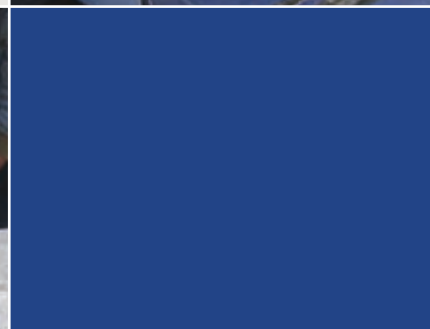
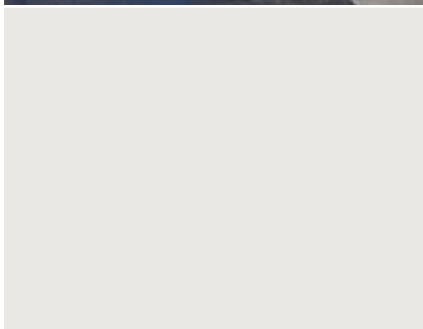
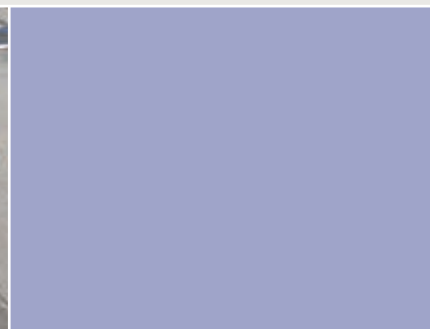
■ PVL Mastic: mastic intended to protect the ends of cell laminates on top of roof slope. Sold separately in cardboard of 12 units of 600 ml cartridges.

■ KSK Primer: primer to apply onto the membrane, before the bonding of PVL cells. Sold separately in 4.5 l can.

■ WM20 Glue: nitril rubber-based glue, to stick the WM20 Base Channel to the Ecosun Top S waterproofing membrane. Sold separately in cardboard of 12 units of 600ml cartridges

Your roofing work: 5 tips for a right installation

- Check out the place of elements likely to provide shade (upstands, kerbs, skylights, chimneys, nearby buildings, trees, etc.).
- Design the installation plan of waterproofing membranes and PVL modules in order to define the energy output and avoid any shadow area.
- Check and approve the minimum acceptable slope ($\geq 3\%$).
- In case of installation on old waterproofing upon insulating boards, make sure of its rigidity and stability.
- Have the installation plan of membranes & PVL modules on the roof checked by our technical department.



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