

22.3.1.2 Categories of integration

BIPV systems in projects can be divided according to the location of the application: roof systems, facade systems, glass construction (conservatory/atrium) systems and building components such as shading and canopy systems. The main mounting locations are the roof and the façade. There are also many creative solutions available in designing how PV systems can be integrated. All these solutions are grouped as building components.

22.3.1.3 Types of buildings

Different buildings obviously have very different functions, for example, apartments and family houses, public buildings, commercial and industrial buildings and nonoccupied building structures. These can either be newly constructed or renovated buildings [34]. Nonoccupied building structures include shelters (bus stops, canopies, parking structures), kiosks (newsstands, gazebos, pavilions, phone booths), public toilet buildings, car parks, streetlights, parking meters, screens and barriers (fences, noise barriers), road signs and commercial billboards.

All types of building or nonoccupied building structures are a potential location for BIPV systems.

The various commercially available mounting applications can be grouped into 10 types, and can be found on the on-line PV database (www.pvdatabase.com).

| Location on a building: | Building component(s): | Manufacturers such as: |
|-------------------------|-------------------------------|--|
| Sloped roof | Tiles and shingles | LaFarge Braas (Figure 22.12), Atlantis Sunslates [35] (Figure 22.15), Japanese tiles (Figure 22.32), UnisolarStanding Seam panels [36] (Figure 22.20). |
| | Nonintegrated profiles | BP Sunflower (Figure 22.33), Econergy InterSole [37], Alutec profiles (Figure 22.34) |
| | Integrated profiles | BOAL/Shell Solar profile system (Figure 22.3), Solrif Solar profile system [38] (Figure 22.35) |
| Flat roof | Roofing element | Powerlight Powerguard® (Figure 22.8), Alwitra Evalon® roofing foil (Figure 22.36) |
| | Integrated profiles | Schüco profile system (Figure 22.37) |
| | Independent support structure | Econergy ConSole [39] (Figure 22.19), Solgreen (Figure 22.38), Sofrel [40] (Figure 22.17), Sobac [41] |
| Facade | Integrated profiles | Schüco façade profile system (Figure 22.39) |
| | Cladding system | BP Solface [42] system (Figure 22.40) |
| | Louvers or sun blinds | ADO louver system (Figure 22.41), Colt Shadovoltaic louver system (Figure 22.9) |
| | Canopy | Donjon canopy system (Figure 22.42) |