SMARTFILM.IN

ELECTRICAL SPECIFICATIONS

Wiring, driver and control reference for PDLC switchable film

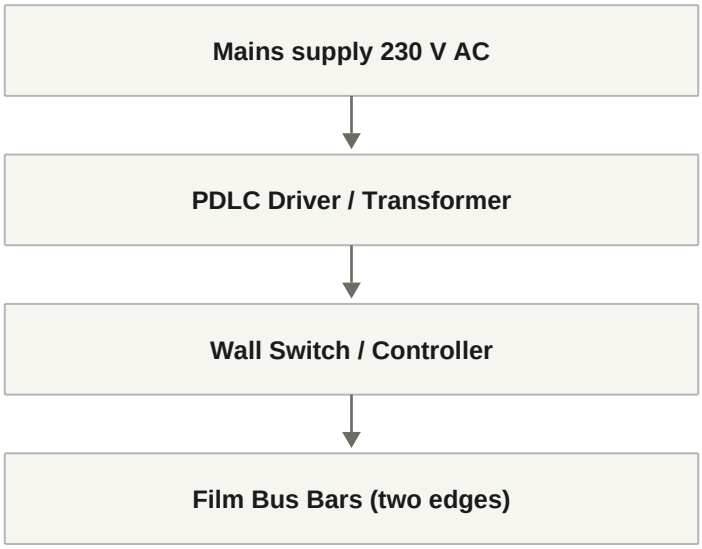
PDLC Switchable Smart Film | Issued 23 July 2026 | Rev 1.0

INDICATIVE DATA

All figures below are indicative typical ranges for PDLC switchable film and are provided for design reference only. Exact values depend on the glass make-up, film construction and controller selected - confirm per project with a written specification before tender or fabrication.

WIRING DIAGRAM

PDLC film runs on low-voltage AC produced by a dedicated driver. A typical single-zone circuit connects as follows:



DRIVER / TRANSFORMER

The driver converts mains to the film’s operating AC voltage and is sized to the total connected film area. Keep the driver close to the film to limit cable run, and mount it in a ventilated, accessible location.

CONTROLLER

Switching can be by a simple wall switch, an RF remote, or a dry-contact / 0-10 V input from a building-management or home-automation system. One driver drives one switching zone.

POWER REQUIREMENTS

Operating Voltage	~ 48 - 65 V AC (driver output)
Power Consumption	~ 4 - 7 W/m2 in the clear state
Standby (private state)	Negligible - power is only drawn when clear
Inrush	Low; size the driver with headroom over steady load

CABLE SPECIFICATIONS

- Low-voltage two-core cable between driver and film; cross-section sized to the run length and load.
- Keep low-voltage film cabling separate from mains runs and terminate at sealed bus bars.
- Use continuous runs where possible; avoid mid-run joints in concealed cavities.

MAXIMUM RUN LENGTH

Long cable runs add voltage drop and can dim the clear state. As indicative guidance keep the driver within a short run of the film (order of a few metres) and confirm the maximum length with the supplied driver’s data sheet for the specific film area.

ELECTRICAL SAFETY

- Mains connection by a qualified electrician only, to local wiring regulations.
- One correctly rated driver per zone; do not parallel films beyond the driver rating.
- Provide isolation for service and label the circuit at the distribution board.