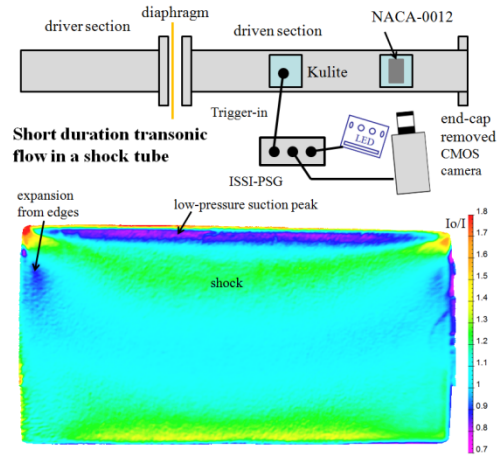


Porous Fast-Response Pressure Sensitive Paint

(Product ID: FP-XXX)

Porous Fast-Response PSP is a three component, single-luminophore high speed pressure sensitive paint (PSP) formulated to provide high speed response (>10kHz) suitable for unsteady pressure measurements with high pressure sensitivity. The temperature sensitivity of these paints is higher than UniFIB or TurboFIB so this PSP is best suited for isothermal environments.

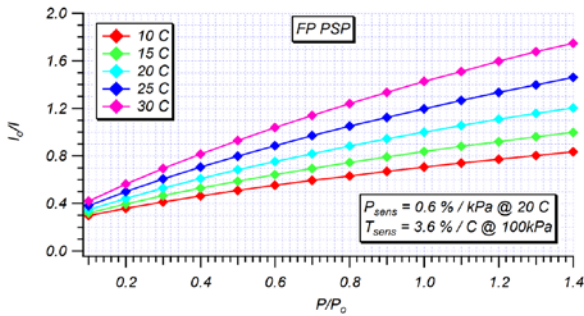
The temporal-response characteristics of PSP are primarily governed by the thickness of the paint formulation and the diffusion coefficient of the binder material. The response time due to diffusion (τ_{diff}) increases with the paint thickness (h) squared and decreases with increasing diffusion coefficient (D_m). Porous binders were developed with the goal of enhancing the oxygen diffusion within the paint layer and, thus, improving the temporal response. The PtTFPP-Porous Polymer formulation is a system with good pressure sensitivity (more than 0.6%/kPa), strong signal and excellent temporal response (over 10-kHz). The paint may be applied to clean, dry, materials such as Aluminum, Glass, Plastic, or Steel, and no base coat or heat treating is required. PtPP is recommended for applications that require a bright paint with temporal resonance of up to 10-kHz.



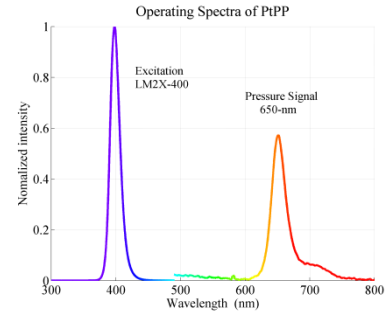
Example of pressure measurements accomplished using PtPP fast PSP.

SPECIFICATIONS

Pressure sensitivity	0.6% per kPa
Pressure range	0-kPa to 200-kPa
Temperature sensitivity	3.6% per °C
Temperature range	0°C to 80°C
Response time	< 100- μ s
Excitation	380-nm to 420-nm
Emission	600-nm to 720-nm
Photo-degradation rate	1% per min
Shelf life	3-months
Available Quantities	100-ml (FP-100)
ECCN	EAR99



Calibration of Porous Fast-Response PSP



Emission spectra of Porous Fast-Response PSP. Paint excited using LM2X-DM-400 LED.

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