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HOLOGRAPHIC HIGH-RESOLUTION PHOTO FILM

Fields of Application

VRP-M, PFG-01 Holographic high-resolution photo films are designed for holographic interferometry.

PFG-03M, PFG-04 Holographic High-resolution Photo Films are designed for image hologram production used as three-dimensional illustrations in printing arts publishing.

PFG-03C Holographic High-resolution Photo Films are designed to record color reflectance holograms.

Characteristics

Name of Indices	VRP-M	PFG-01	PFG-03M	PFG-03C	PFG-04
Holographic sensitivity (H) when exposed by a laser for wave-length, J/m ² , not more than 514 nm 530 nm 633 nm	1,0	1,0	20	30 30	2500-3000
Diffraction efficiency, (η) %, not less than	40	40	45	45	70
Boundary zone of spectral sensitization, nm, not more than	565	650	680	680	-
Maximum of spectral sensitization, nm	525 \pm 5	625 \pm 10	635 \pm 5	525 \pm 5 635 \pm 5	-
Adhesion between emulsion layer and base after chemical photographic processing, conventional classes A-F	A-C	A-C	A-C	A-C	A-C
Temperature of emulsion layer Deformation in alkaline-sulfite solution, Tdef. °C, not less than	90	90	34	34	34
Thickness of photo layer, micrometer	6,5 \pm 1	7 \pm 1	7 \pm 1	10 \pm 1	12-15
Antihalation protection	NO	NO	NO	NO	NO



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Chemical-Photographic processing conditions of VRP-M and PFG-01 photographic films:

Name of the stages	Processing time, min.	Temperature of solutions, water, air, °C
Development in SM-6 or VRP-M developer 1:5	2-3	19
Washing in water	2-3	19
Bleaching in PBU-amidol bleacher	to be bleached completely	19
Washing in water	10-20	19
Drying in ethanol: In 50% ethanol In 75% ethanol In 96% ethanol Drying in the open air	2 2 2 to be dried out completely	19

Chemical-Photographic processing conditions of PFG-03M photographic films

Name of the stages	Processing time, min.	Temperature of solutions, water, air, °C
Hardening	2-3	19
Washing in water	1-2	19
Development in GP-3 developer	10-15	19
Washing in water	2	19
Fixing	2	19
Washing in water	5-10	19
Drying in ethanol: In 50% ethanol In 75% ethanol In 96% ethanol Drying in the open air	2 2 2 to be dried out completely	19 room temperature

Chemical-Photographic processing conditions of PFG-03C photographic films

Name of the stages	Processing time, min.	Temperature of solutions, water, air, °C
Hardening	6	19
Washing in water	1-2	19
Development in VRP-M or CW-C2 developer	4-5 2	19
Washing in water	1-2	19



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Bleaching	5-8	19
Washing in water	2	19
Stop bath	2	19
Washing in water	2	19
Drying in ethanol:		
In 50% ethanol	2	19
In 75% ethanol	2	19
In 96% ethanol	2	19
Drying in the open air	to be dried out completely	room temperature

It is allowed to use developers and bleaching solutions of other types that not deteriorate the quality of the processed photo films.

Chemical-Photographic processing conditions of PFG-04 photographic films

Name of the stages	Processing time, min.	Temperature of solutions, water, air, °C
Thermal hardening in a drying electrical cabinet	30	70
Cooling to room temperature		
Swelling and washing in desalted (distilled) water	3	20
Dehydration in water		
Solutions of isopropyl alcohol:		
- 50% solution	2-3	20
- 75% solution	2-3	20
- 100% solution	2-3	20
Thermal hardening in a drying cabinet	60	100