KODAK GOLD Films

KODAK GOLD MAX 400 and 800 Films
KODAK GOLD 100 and 200 Films

INTRODUCTION

KODAK GOLD 100 and 200 Films and KODAK GOLD MAX 400 and 800 Films are a family of color negative films that offer the best combination of color saturation, color accuracy, and sharpness at ISO 100, 200, 400, and 800 that are available from any manufacturer. They are designed for general picture-taking situations in daylight or with electronic flash. You can also expose them under photolamps (3400 K) or tungsten illumination (3200 K) with filters.

KODAK GOLD 100 and 200 Films feature excellent color accuracy and saturation and high sharpness and resolution. They also feature wide exposure latitude—from two stops underexposure to three stops overexposure.

KODAK GOLD MAX 400 and 800 Films provide maximum versatility in a wide variety of conditions—whether sunlight or low light; fast action or no action. GOLD MAX 400 Film is ideal for automatic cameras with the best combination of sharpness and color saturation and accuracy available. For zoom cameras, the extra speed of GOLD MAX 800 Film makes it the ideal film choice for sharp, rich color saturation with greater flash range and shadow detail.

Other features include—

FEATURES	BENEFITS
• Excellent latent-image keeping characteristics	• Excellent consistency • Excellent processing robustness
• Similar printing characteristics	• One-channel printing
• GOLD 100 Film—Outstanding sharpness and high resolution	• Ideal for use in daylight
• GOLD 200 Film—High sharpness and high resolution	• Excellent results for general-purpose photography
• GOLD MAX 400 Film—An enhanced, multi-purpose film	• Flexibility in a variety of lighting and action situations • Maximum versatility for automatic cameras
• GOLD MAX 800 Film—High film speed with high image quality	• Sharp prints in the widest range of picture-taking conditions • Maximum versatility for zoom cameras
• Designed for processing in KODAK FLEXICOLOR Chemicals for Process C-41	• Processed in the same chemicals as KODAK ROYAL GOLD, Pro, and EKTACOLOR Films, as well as KODAK VERICOLOR and EKTAPRESS Professional Films

DARKROOM RECOMMENDATIONS

Do not use a safelight. Handle unprocessed film in total darkness.

STORAGE AND HANDLING

Load and unload your camera in subdued light.

Store unexposed film at 70°F (21°C) or lower in the original sealed package. Always store film (exposed or unexposed) in a cool, dry place. Process film as soon as possible after exposure.

Protect negatives from strong light, and store them in a cool, dry place. For more information on storing negatives, see KODAK Publication No. E-30, *Storage and Care of KODAK Photographic Materials—Before and After Processing*.

Note: GOLD MAX 800 Film is very sensitive to environmental radiation; expose and process it promptly. Request **visual** inspection at airport x-ray inspection stations. Some x-ray equipment may fog this film.

EXPOSURE

Film Speed

Use the speed numbers in the table below with cameras or meters marked for ISO, ASA, or DIN speeds or exposure indexes. Do not change the film-speed setting when you use a filter if your camera has through-the-lens metering.

KODAK Film	ISO/DIN Speed and KODAK WRATTEN Gelatin Filter*		
	Daylight	Photolamp (3400 K)	Tungsten (3200 K)
GOLD 100	100/21°	32/16° No. 80B	25/15° No. 80A
GOLD 200	200/24°	64/19° No. 80B	50/18° No. 80A
GOLD MAX 400	400/27°	125/22° No. 80B	100/21° No. 80A
GOLD MAX 800	800/30°	250/25° No. 80B	200/24° No. 80A

* For best results without special printing.

Daylight

Use the exposures in the table below for average frontlit subjects from 2 hours after sunrise to 2 hours before sunset.

Lighting Conditions	Shutter Speed (second) and Lens Opening			
	GOLD 100	GOLD 200	GOLD MAX 400	GOLD MAX 800
Bright or Hazy Sun on Light Sand or Snow	1/125 *f*/16	1/250 *f*/16	1/500 *f*/16	1/1000 *f*/16
Bright or Hazy Sun (Distinct Shadows)*	1/125 *f*/11	1/250 *f*/11	1/500 *f*/11	1/1000 *f*/11
Weak, Hazy Sun (Soft Shadows)	1/125 *f*/8	1/250 *f*/8	1/500 *f*/8	1/1000 *f*/8
Cloudy Bright (No shadows)	1/125 *f*/5.6	1/250 *f*/5.6	1/500 *f*/5.6	1/1000 *f*/5.6
Heavy Overcast or Open Shade†	1/125 *f*/4	1/250 *f*/4	1/500 *f*/4	1/1000 *f*/4

*Use *f*/5.6 for backlit close-up subjects.
† Subjects shaded from the sun but lighted by a large area of clear sky.

Electronic Flash

Use the appropriate guide number in the table below as a starting point for your equipment. Select the unit output closest to the number given by your flash manufacturer. Then find the guide number for feet or metres.

To determine the lens opening, divide the guide number by the flash-to-subject distance. If negatives are too dark (overexposed), use a higher guide number; if they're too light (underexposed), use a lower number.

Unit Output (BCPS)*	Guide Number Distances in Feet/Metres			
	GOLD 100	GOLD 200	GOLD MAX 400	GOLD MAX 800
350	40/12	60/18	85/26	120/36
500	50/15	70/21	100/30	140/42
700	60/18	85/26	120/36	170/50
1000	70/21	100/30	140/42	200/60
1400	85/26	120/36	170/50	240/70
2000	100/30	140/42	200/60	280/85
2800	120/36	170/50	240/70	330/100
4000	140/42	200/60	280/85	400/120
5600	170/50	240/70	340/105	470/140
8000	200/60	280/85	400/120	560/170

* BCPS = beam candlepower seconds

Fluorescent and High-Intensity Discharge Lamps

For best results without special printing, use the color-correction filters in the table below as starting points when you expose these films under fluorescent and high-intensity discharge lamps. Use exposure times of 1/60 second or longer to avoid the brightness and color variations that occur during a single alternating-current cycle.

Type of Fluorescent Lamp	KODAK Color Compensating Filters	Exposure Adjustment
Daylight	40R	+⅔ stop
White	20C + 30M	+1 stop
Warm White	40B	+1 stop
Warm White Deluxe	30B + 30C	+1⅓ stops
Cool White	30M	+⅔ stop
Cool White Deluxe	20C + 10M	+⅔ stop

Note: When you don't know the type of fluorescent lamps, try a 10C + 20M filter combination and increase exposure by ⅔ stop; color rendition may be less than optimum.

Type of High-Intensity Discharge Lamp	KODAK Color Compensating Filters	Exposure Adjustment
High-Pressure Sodium Vapor	70B + 50C	+3 stops
Metal Halide	10R + 20M	+⅔ stop
Mercury Vapor with Phosphor	20R + 20M	+⅔ stop
Mercury Vapor without Phosphor	80R	+1⅔ stops

Note: Some primary color filters were used in the tables above to reduce the number of filters and/or to keep the exposure adjustment to a minimum. Red filters were substituted for equivalent filtration in magenta and yellow. Blue filters were substituted for equivalent filtration in cyan and magenta.

Adjustments for Long and Short Exposures

You do not need to make any exposure or filter adjustments for exposure times of 1/10,000 second to 10 seconds with GOLD 100 and 200 Films; no adjustments are required for exposure times of 1/10,000 second to 1 second with GOLD MAX 400 and 800 Films.

PROCESSING

Process GOLD Films in KODAK FLEXICOLOR Chemicals for Process C-41. For more information, see KODAK Publication No. Z-131, *Using KODAK FLEXICOLOR Chemicals.*

JUDGING NEGATIVE EXPOSURE

You can check the exposure level with a suitable electronic densitometer equipped with a filter such as a KODAK WRATTEN Gelatin Filter No. 92 or the red filter for Status M densitometry. Depending on the subject and the light source used for exposure, a normally exposed and processed color negative measured through the red filter should have the approximate densities listed below.

Area Measured	GOLD Film Density Reading			
	100	200	MAX 400	MAX 800
KODAK Gray Card (gray side) receiving same illumination as subject	0.90 to 1.10	0.85 to 1.05	0.85 to 1.05	0.95 to 1.15
Lightest step (darkest in negative) of *KODAK Paper Gray Scale* receiving same illumination as subject	1.30 to 1.50	1.25 to 1.45	1.25 to 1.45	1.35 to 1.55
Highest diffuse density on normally lighted forehead				
—light complexion	1.20 to 1.5	1.15 to 1.45	1.15 to 1.45	1.25 to 1.55
—dark complexion	0.95 to 1.35	0.90 to 1.30	0.90 to 1.30	0.90 to 1.30

Because of the extreme range in skin color, use these red density values for a normally lighted forehead only as a guide. For best results, use a *KODAK Gray Card* (gray side).

PRINTING NEGATIVES

The family of GOLD Films features similar printing characteristics; you can use *one* printer channel to print all four films.

Note: For critical applications, you may want to customize a channel for printing GOLD MAX 800 Film negatives.

You can make color prints from negatives by printing them on KODAK EKTACOLOR Edge 5 or KODAK EKTACOLOR ROYAL V Papers or KODAK DURAFLEX® RA Print Material.

Make color transparencies by printing negatives on KODAK VERICOLOR Print Film, KODAK VERICOLOR Slide Film, or KODAK DURATRANS® RA or KODAK DURACLEAR™ RA Display Material.

Make black-and-white prints on KODAK PANALURE SELECT Papers for conventional black-and-white processing or KODAK EKTAMAX RA Professional Papers for Process RA-4.

IMAGE STRUCTURE

Print Grain Index

The Print Grain Index number refers to a method of defining graininess in a print made with diffuse-printing illumination. It replaces rms granularity and has a different scale which cannot be compared to rms granularity.

- This method uses a uniform perceptual scale, with a change of four units equaling a *just noticeable difference* in graininess for 90 percent of observers.
- A Print Grain Index rating of 25 on the scale represents the approximate visual threshold for graininess. A higher number indicates an increase in the amount of graininess observed.
- The standardized inspection (print-to-viewer) distance for all print sizes is 14 inches, the typical viewing distance for a 4 x 6-inch print.
- In practice, larger prints will likely be viewed from distances greater than 14 inches, which reduces apparent graininess.
- Print Grain Index numbers may not represent graininess observed from more specular printing illuminants, such as condenser enlargers.

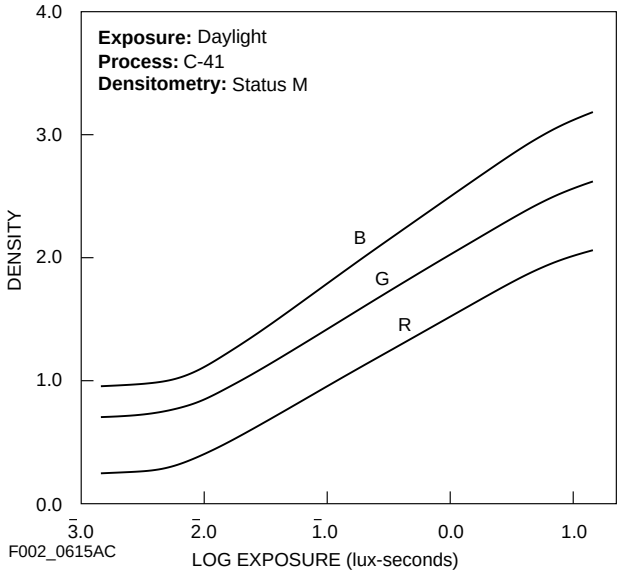
The Print Grain Index numbers listed in this publication apply to the following standards:

Negative size:	24 x 36 mm (135-size standard format)
Print size:	4 x 6 inches
Magnification:	4.4X

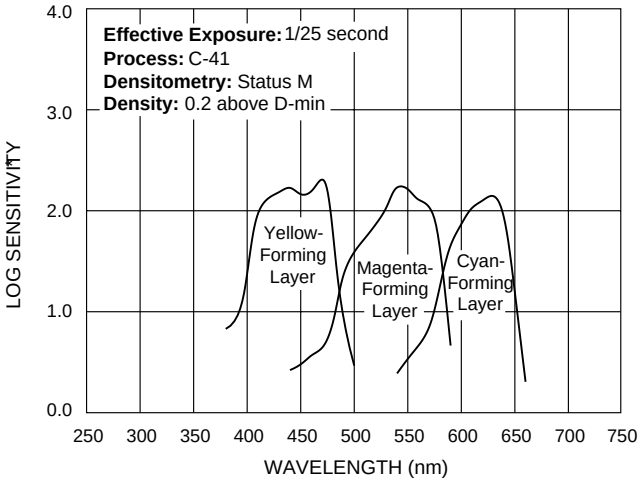
KODAK GOLD 100 FILM

Print Grain Index: 45

Characteristic Curves

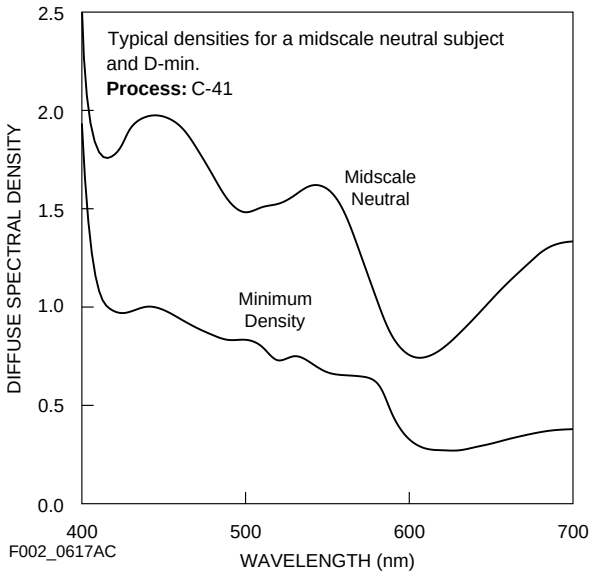


Spectral-Sensitivity Curves



*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

Spectral-Dye-Density Curves

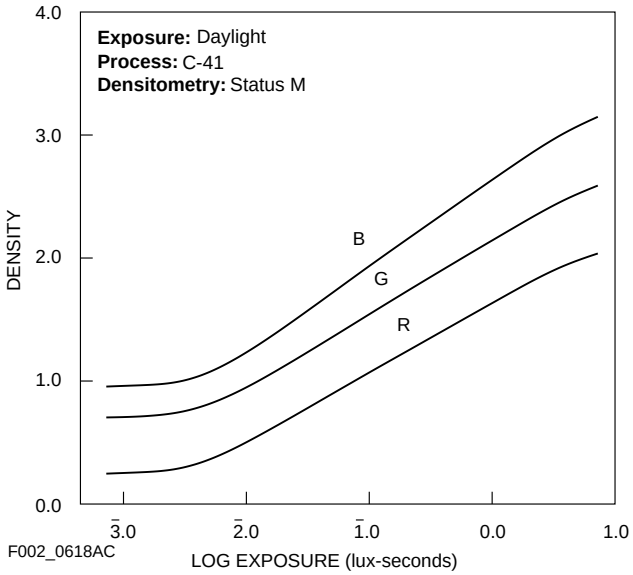


NOTICE: The sensitometric curves and data in this publication represent product tested under the conditions of exposure and processing specified. They are representative of production coatings, and therefore do not apply directly to a particular box or roll of photographic material. They do not represent standards or specifications that must be met by Eastman Kodak Company. The company reserves the right to change and improve product characteristics at any time.

KODAK GOLD 200 FILM

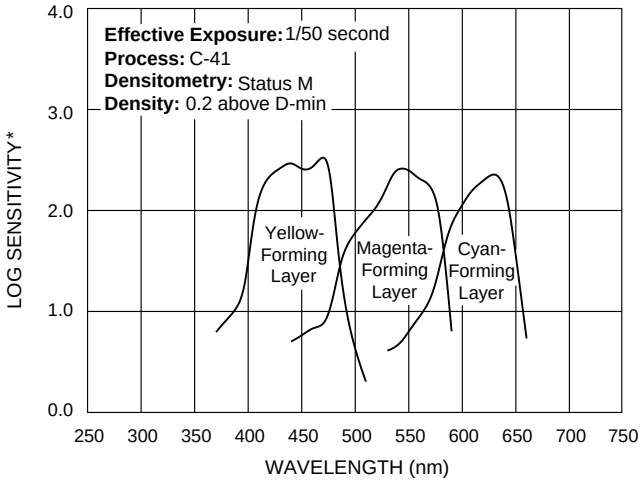
Print Grain Index: 47

Characteristic Curves



F002_0618AC

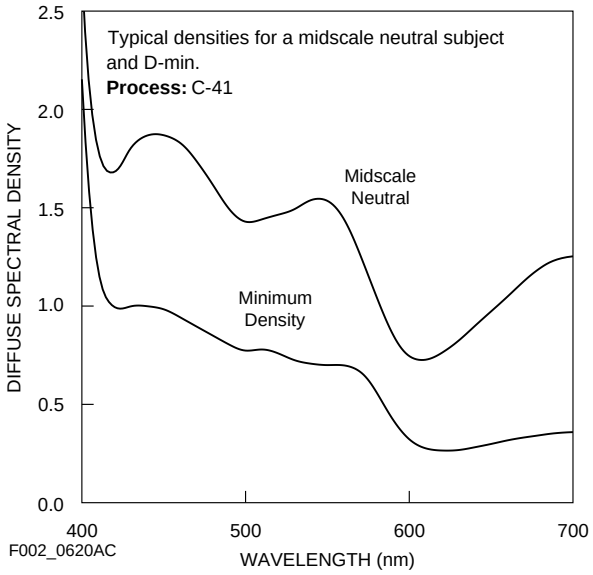
Spectral-Sensitivity Curves



*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

F002_0619AC

Spectral-Dye-Density Curves



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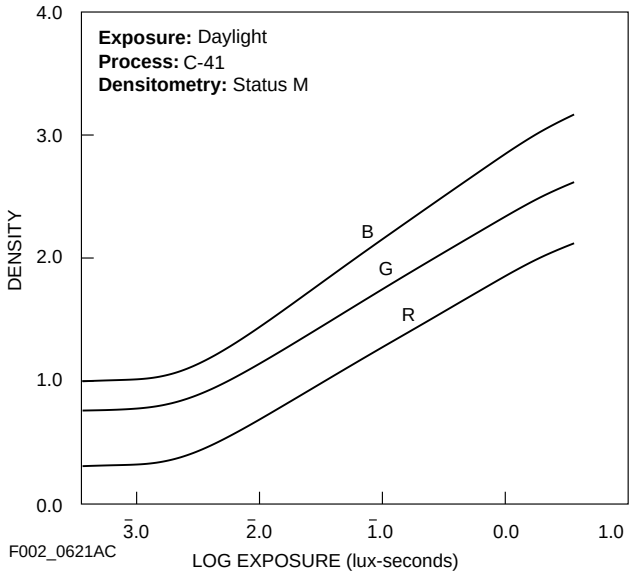
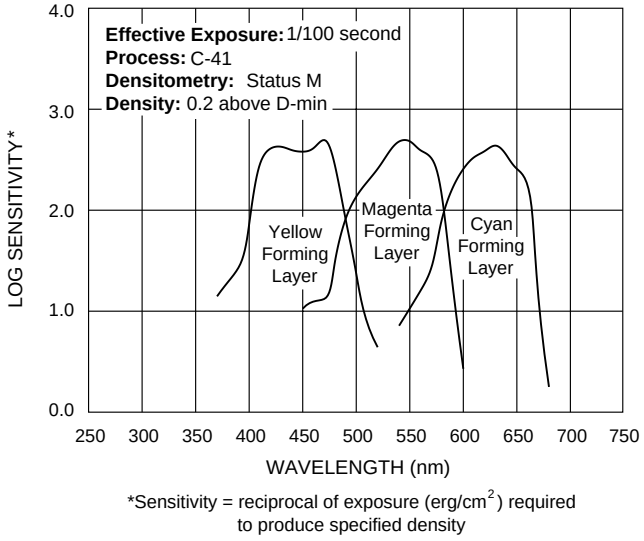
KODAK GOLD MAX 400 FILM

Print Grain Index: 49

Characteristic Curves

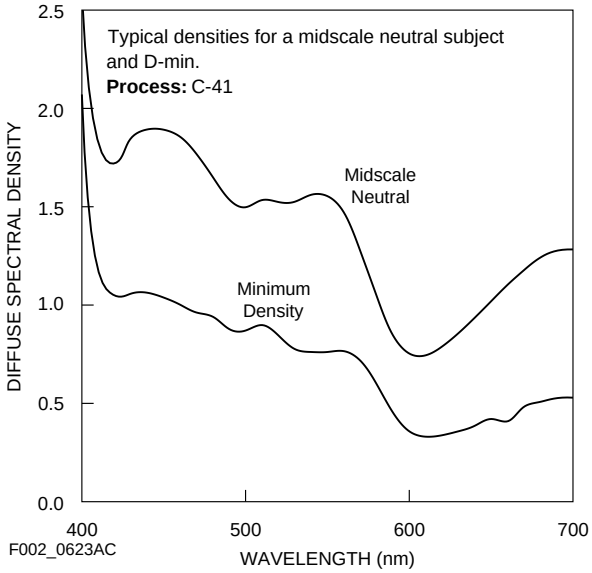


Spectral-Sensitivity Curves



*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

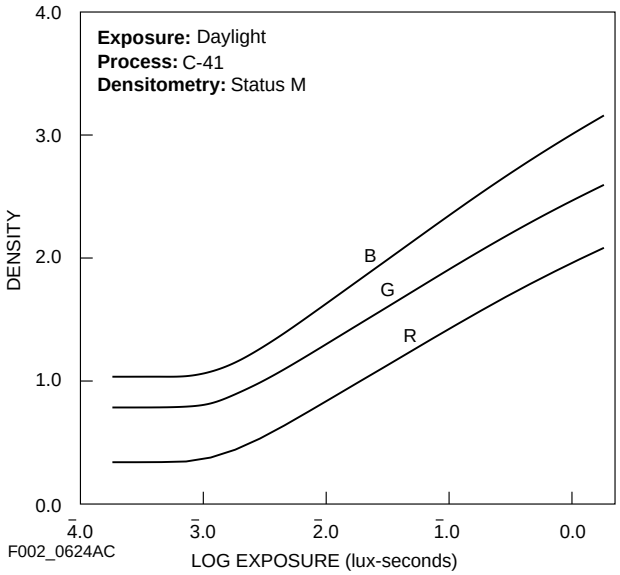
Spectral-Dye-Density Curves



KODAK GOLD MAX 800 FILM

Print Grain Index: 57

Characteristic Curves



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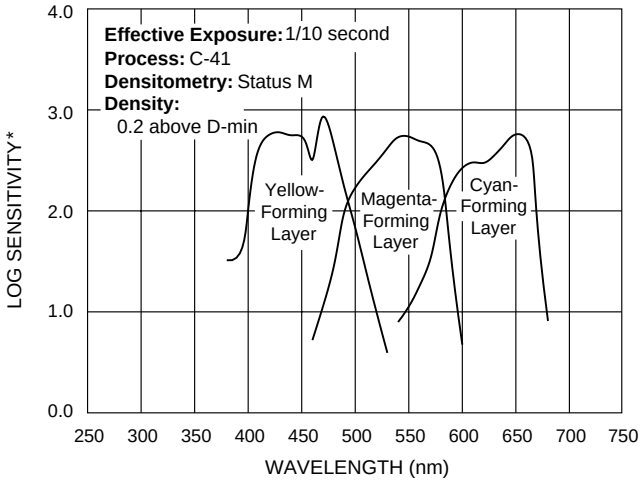
Spectral-Sensitivity Curves



*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

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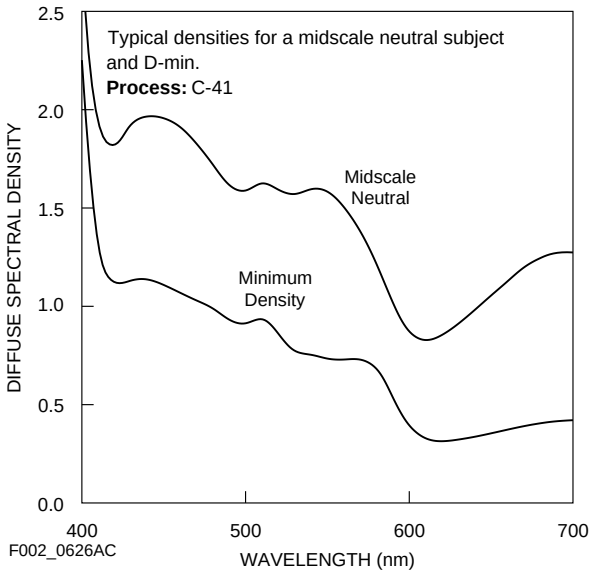
Spectral-Dye-Density Curves



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MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials.

Additional information is available on the Kodak website and through the U.S.A. and Canada faxback system.

The following publications are available from Kodak Customer Service and from dealers who sell Kodak products, or you can contact Kodak in your country for more information.

E-30	*Storage and Care of KODAK Photographic Materials—Before and After Processing*
E-44	*KODAK ROYAL GOLD 1000 Film*
E-133	*KODAK EKTACHROME ELITE II 50 Film*
E-134	*KODAK ELITE CHROME 100 Film*
G-22	*KODAK EKTAMAX RA Professional Paper*
G-27	*KODAK PANALURE SELECT RC Paper*
E-148	*KODAK ELITE CHROME 200 Film*
E-149	*KODAK ELITE CHROME 400 Film*
Z-131	*Using KODAK FLEXICOLOR Chemicals*

Kodak Information Center's Faxback System

—Available 24 hours a day, 7 days a week—

Many technical support publications for Kodak products can be sent to your **fax** machine from the Kodak Information Center. Call:

U.S.A. 1-800-242-2424, Ext. 33
Canada 1-800-295-5531

If you have questions about Kodak products, call Kodak.

In the U.S.A.:
1-800-242-2424, Ext 25, Monday–Friday
9 a.m.–7 p.m. (Eastern time)

In Canada:
1-800-465-6325, Monday–Friday
8:30 a.m.–5 p.m. (Eastern time)

Or contact Kodak on-line at:
http://www.kodak.com

Note: The Kodak materials described in this publication for use with KODAK GOLD and GOLD MAX Films are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

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