

# 《What's New》

## DNP Standard Test Chart

Aug. 1<sup>st</sup>, 2018

2nd Sales Division  
Fine Optronics Operations  
Dai Nippon Printing Co., Ltd.

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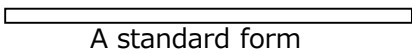
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# Test Chart Forms

## Sectional Views

### 1) Reflection Type

a. Photographic Paper (Opaque)



A standard form

Paper Thickness  
0.23 mmt

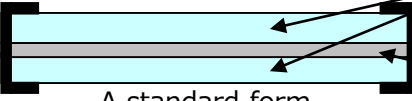
b. Photographic Paper +Veneer Board



Board Thickness  
3.0 mmt

### 2) Transmission Type

a. Slide Type



A standard form

Bareglass Thickness  
1.3, 2.0, 3.2 mmt

Film Thickness  
0.175 mmt

Fixing paper tape

b. Glass Board



Emulsion Layer Thickness  
4 ~ 8 μm

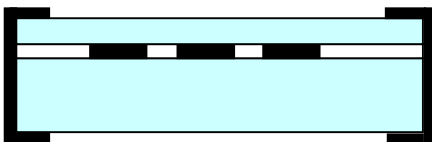
A Glass Board Thickness  
5.0, 3.0, 1.6 mmt

c. Glass Board +Top Coat

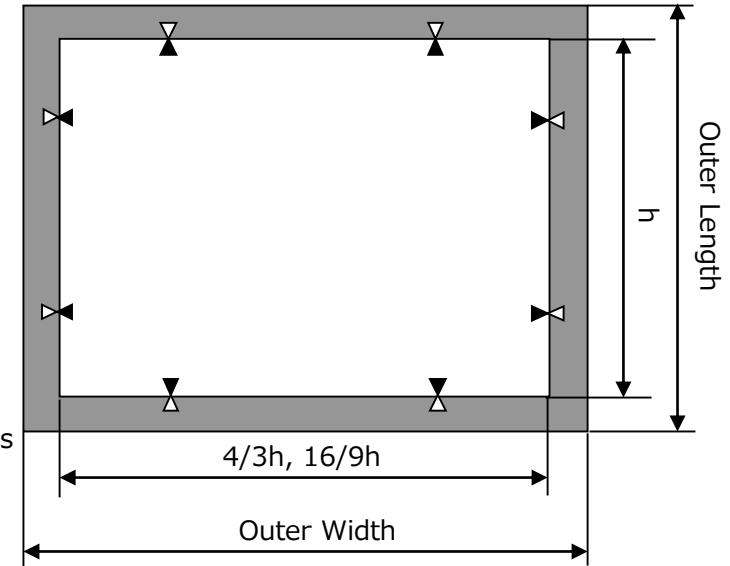


Top Coat Thickness  
Approx. 1μm

d. Glass Board +Bareglass

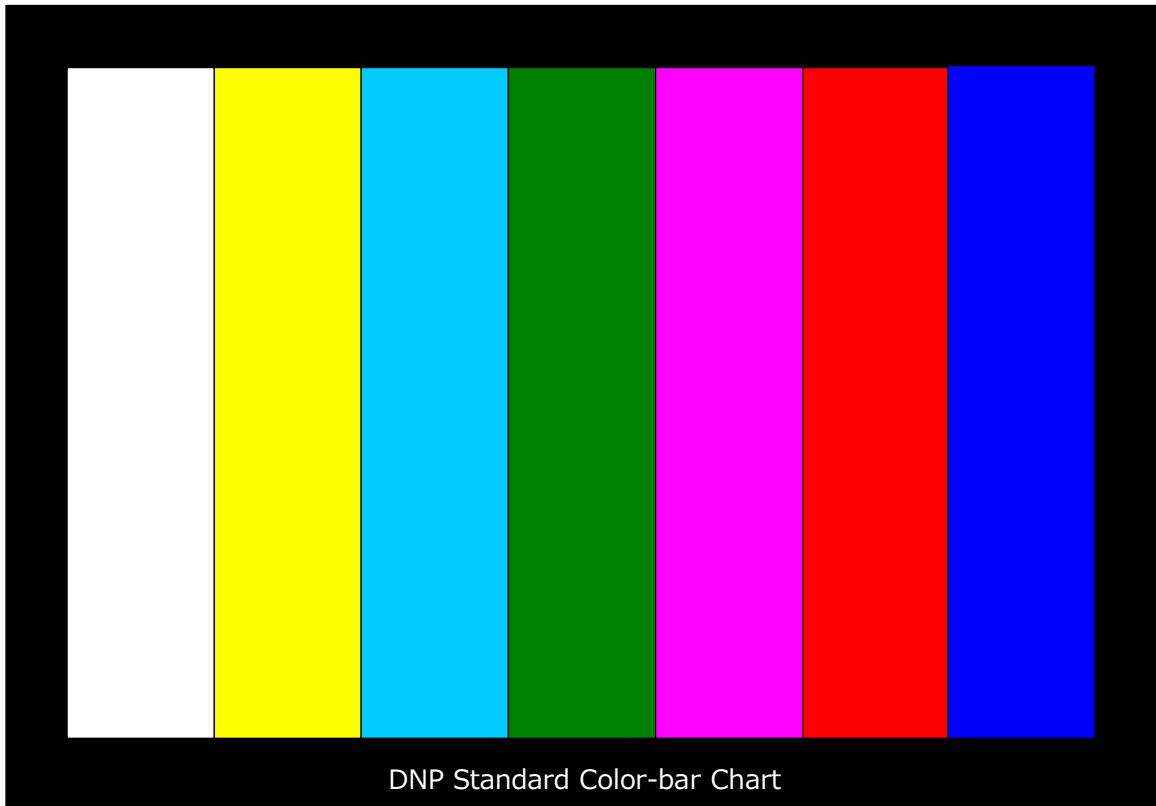


## Chart Overall Size



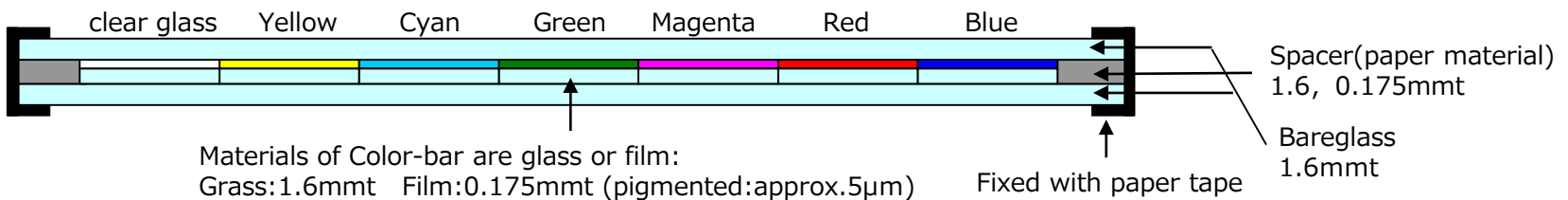
	Aspect ratio	Valid area	Outer size
Reflection Type	4 : 3	180×240	220×280
	16 : 9	288×512	350×570
Transmission Type	4 : 3	180×240	290×320
	16 : 9	153×272	200×310

# DNP Standard color-bar Chart



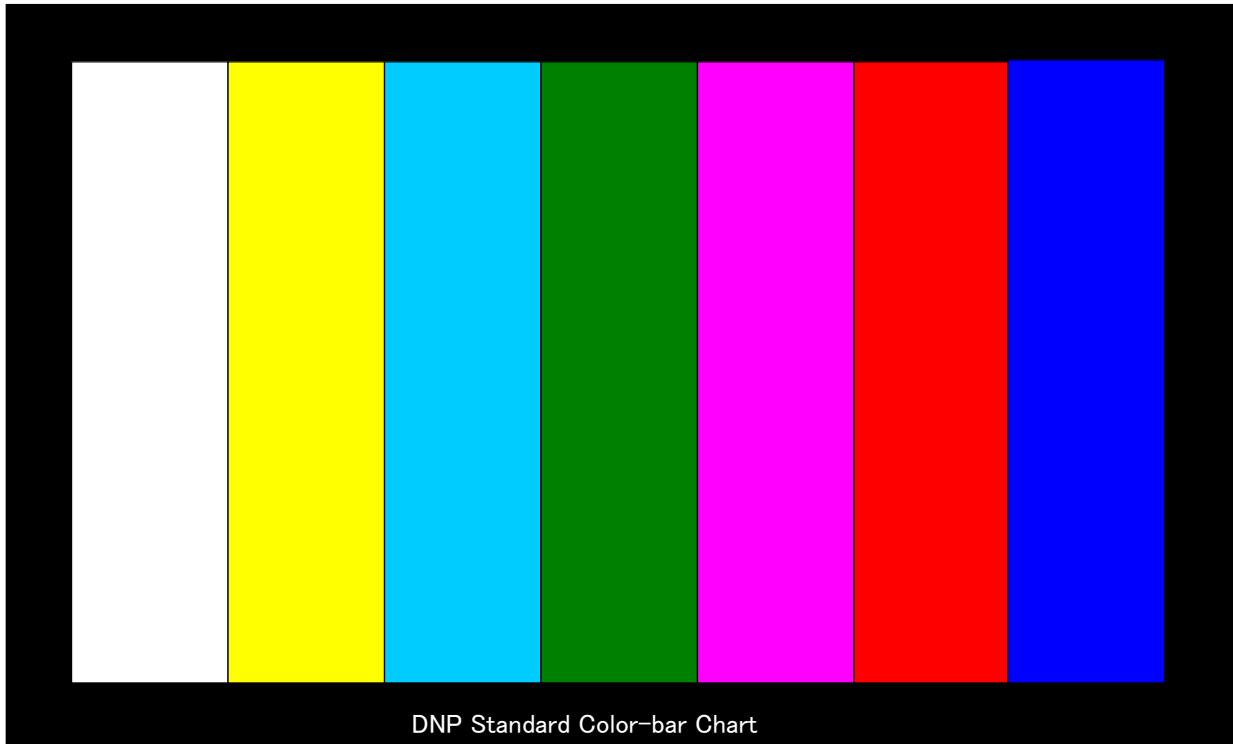
This Chart is only Transmission Type

	Valid area	Outer size
Transmission Type	175×245	290×320



Color	Clear	Yellow	Cyan	Green	Magenta	Red	Blue
Concentration	0.08~ 1.0	1.4~ 2.0	0.9~ 1.3	1.95~ 2.35	1.1~ 1.5	1.8~ 3.0	0.8~ 1.2

# DNP Standard color-bar Chart for HD TV

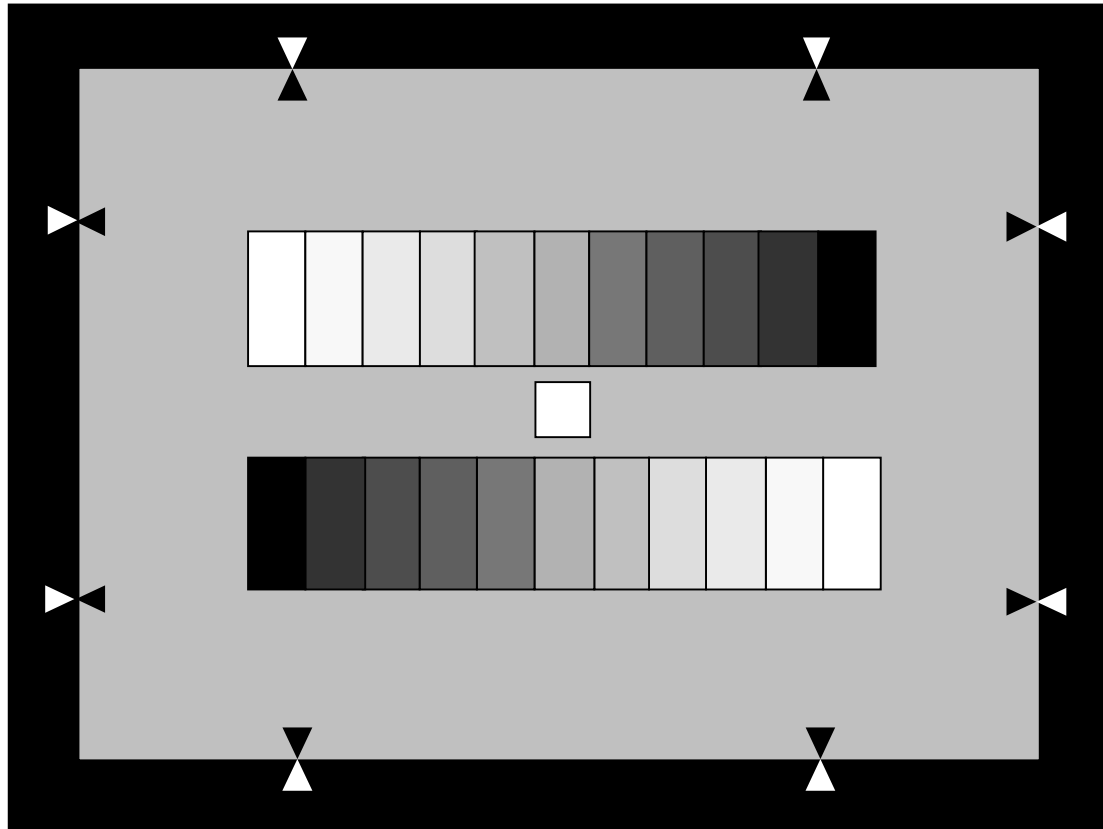


This Chart is only Transmission Type

	Valid area	Outer size
Transmission Type	153×272	200×310

Color	Clear	Yellow	Cyan	Green	Magenta	Red	Blue
Concentration	0.08~ 1.0	1.4~ 2.0	0.9~ 1.3	1.95~ 2.35	1.1~ 1.5	1.8~ 3.0	0.8~ 1.2

# 11steps Grayscale Chart ( $\gamma = 0.45$ ) Transmission Type

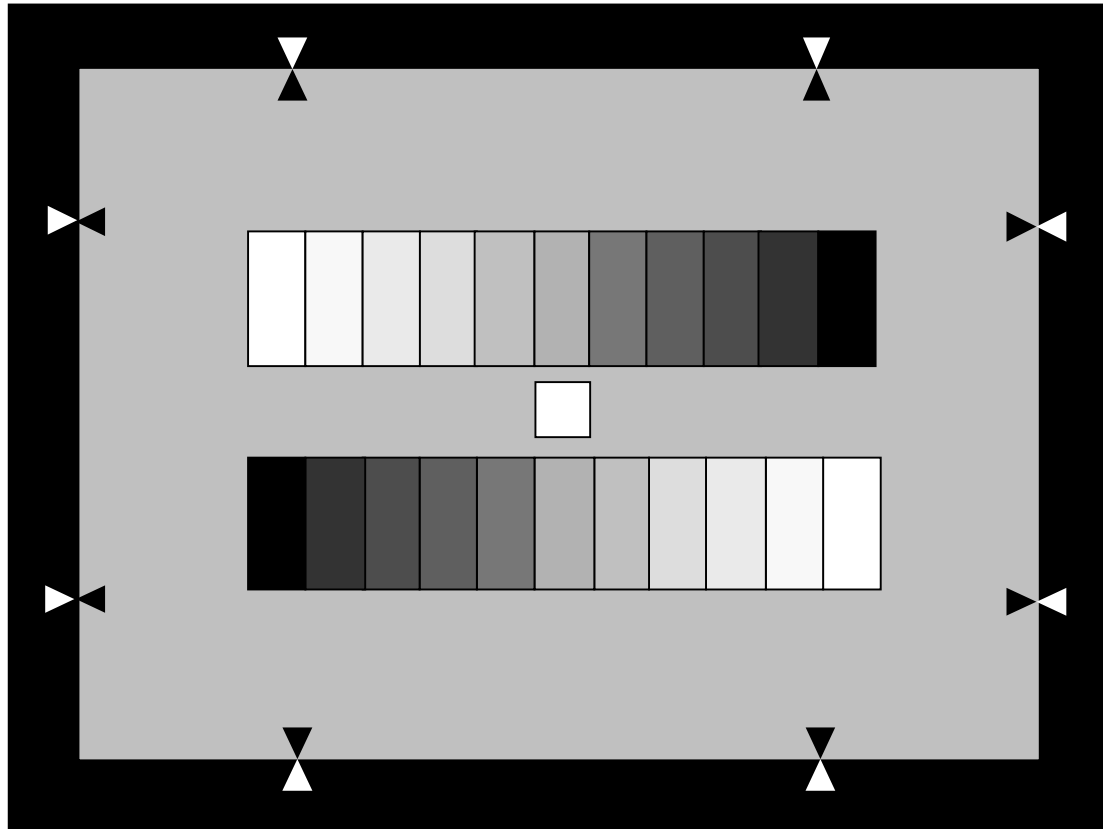


This is a case of  
Transmission Type

	Valid area	Outer size
Transmission Type	180×240	290×320

Step Number	1 (W)	2	3	4	5	6	7	8	9	10	11 (B)	Back ground
Transmittance (%)	74.1	61.7	50.1	40.7	31.6	23.4	16.6	12.0	7.6	4.5	2.0	22.4
Concentration	0.13	0.21	0.30	0.39	0.50	0.63	0.78	0.92	1.12	1.35	1.70	0.65

# 11steps Grayscale Chart ( $\gamma = 0.45$ ) Reflection Type

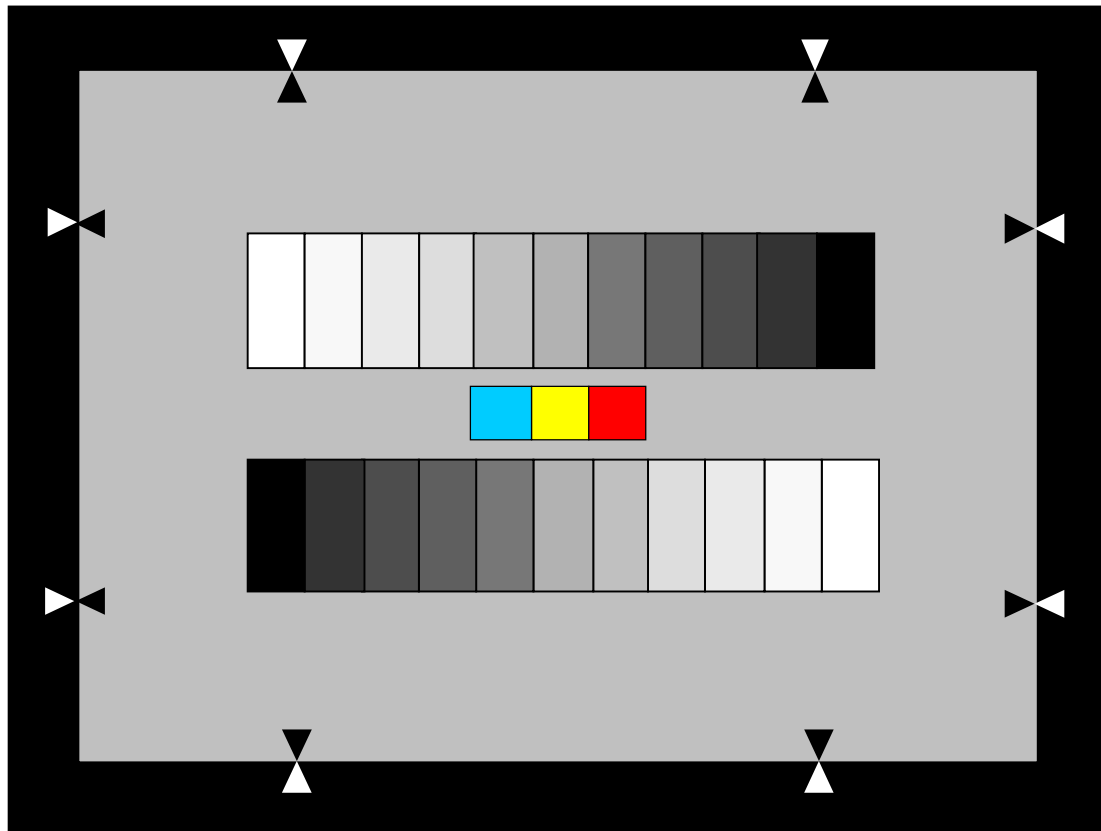


This is a case of Reflection Type

	Valid area	Outer size
Reflection Type	180×240	290×320

Step Number	1 (W)	2	3	4	5	6	7	8	9	10	11 (B)	Back ground
Reflectance (%)	83.0	71.0	57.0	46.0	37.0	27.4	19.5	13.4	8.3	4.75	2.0	18.0
Concentration	0.13	0.15	0.24	0.34	0.43	0.56	0.71	0.87	1.08	1.32	1.70	0.74

# 11steps Grayscale Chart ( $\gamma=0.45$ ) with 3 Color-chips



This Chart is  
only Transmission Type

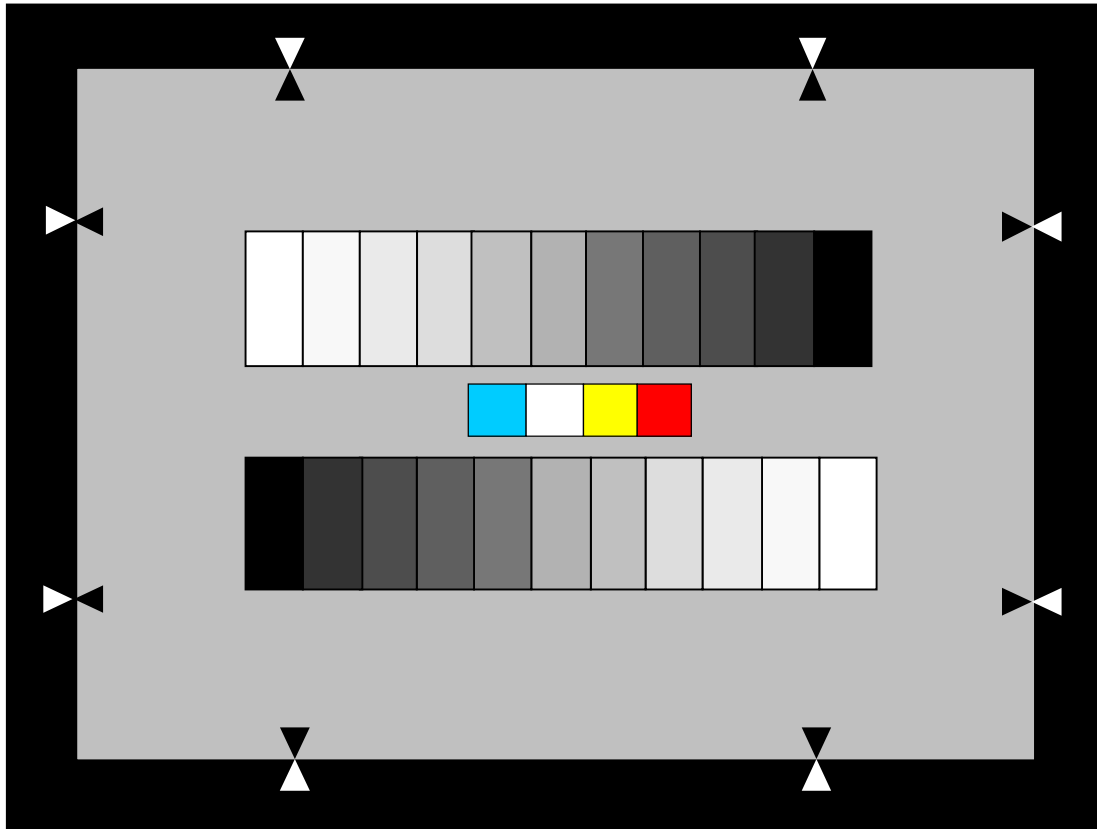
Valid area	Outer size
180×240	290×320

Color	Cyan	Yellow	Red
Concentration	1.00~ 1.20	1.60~ 1.80	1.65~ 1.85
ND filter	70%	50%	

Step Number	1 (W)	2	3	4	5	6	7	8	9	10	11 (B)	Back ground
Transmittance (%)	74.1	61.7	50.1	40.7	31.6	23.4	16.6	12.0	7.6	4.5	2.0	22.4
Concentration	0.13	0.21	0.30	0.39	0.50	0.63	0.78	0.92	1.12	1.35	1.70	0.65



# 11steps Grayscale Chart ( $\gamma=0.45$ ) with 1W3C



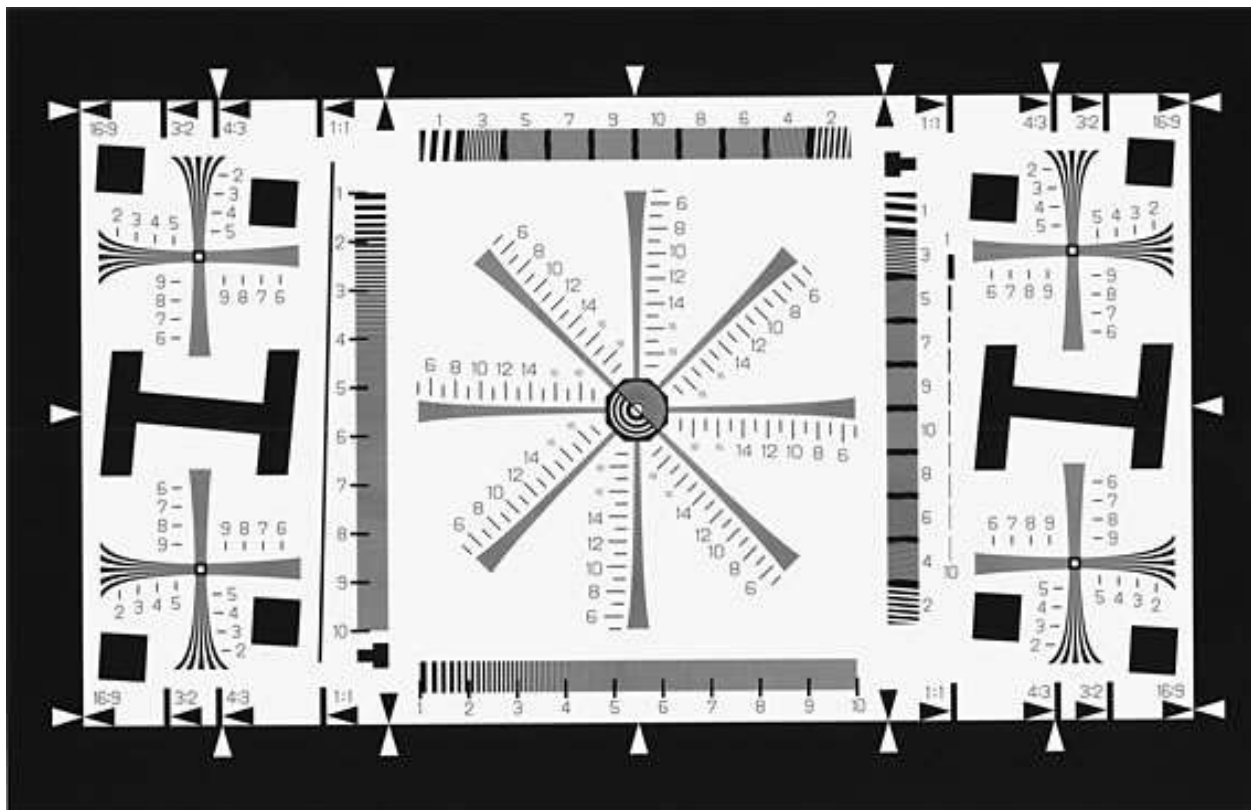
This Chart is only Transmission Type

Valid area	Outer size
180×240	290×320

Color	Cyan	Clear	Yellow	Red
Concentration	1.00~ 1.20	0.08~ 1.00	1.60~ 1.80	1.65~ 1.85
ND filter	70%	/	50%	/

Step Number	1 (W)	2	3	4	5	6	7	8	9	10	11 (B)	Back ground
Transmittance (%)	74.1	61.7	50.1	40.7	31.6	23.4	16.6	12.0	7.6	4.5	2.0	22.4
Concentration	0.13	0.21	0.30	0.39	0.50	0.63	0.78	0.92	1.12	1.35	1.70	0.65

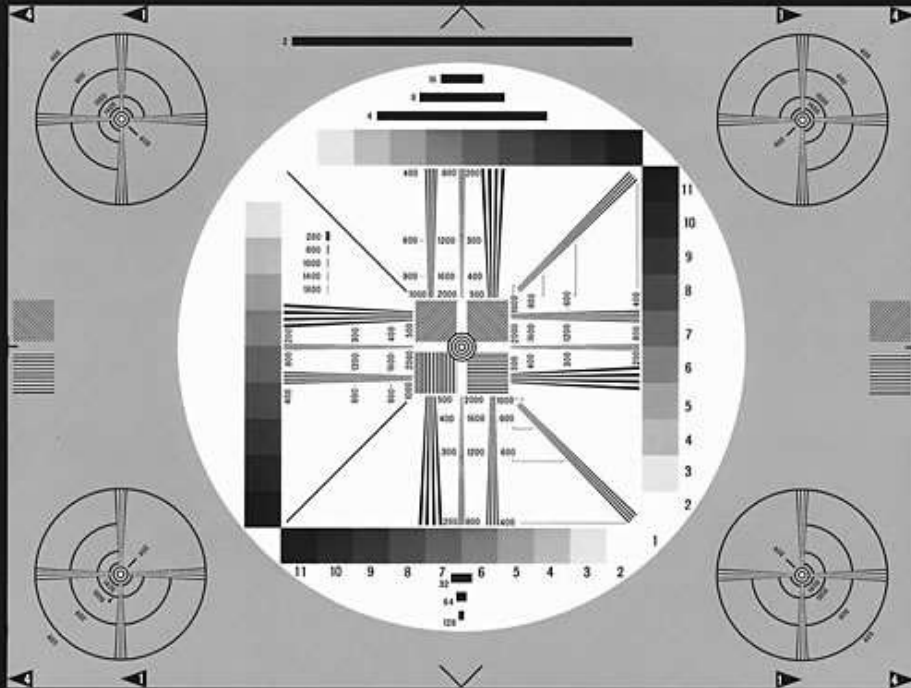
# Resolution Chart for digital still camera



- This Chart is used to evaluate the Resolution of digital still camera. On a ISO12233 Chart basis, this Chart is arranged 500~2000TV of wedges directed at 0° 45° 90° 135° .

Aspect ratio	Transmission		Reflection	
	High	Wide	High	Wide
16 : 9	153	272	200	355.56
3 : 2	153	229.5	200	300
4 : 3	153	204	200	266.67
1 : 1	153	153	200	200
outer	200	310	240	395.56

# High Resolution Chart I



1. Specification of this Chart is the same as of JEITA Test Chart(4:3type). Also, the usage is the same. This Chart is designed to evaluate 200~2000 TV of wedges for image assessment.
2. You can evaluate (1)Resolution (2)Streaking (3)Linking (4)Interlace scan (5)Shading (6)Linearity of scan (7)Aspect ratio of scan (8)Alignment (9)Graduation sequence
3. Transmittance or Reflectance of main parts is stated as follows,
  - (1) 83.0% or more, inside white of the big circle
  - (2) 26.0%, outside background of the big circle
  - (3) Please refer to the list, Grayscale Chart

Step Number	1	2	3	4	5	6	7	8	9	10	11
Transmittance / Reflectance (%)	83.0	71.0	57.0	46.0	37.0	27.4	19.5	13.4	8.3	4.75	2.0