

Gamma Transfer 1D LUT (1D Look Up Table)

■ LUT classification

Viewing LUT

■ LUT Overview

Conversion from Canon Log / Canon Log 2 / Canon Log 3 gamma 1D LUT

■ File Format

.cube format

■ Correspondence Table

Input			Output	
Gamma	Range	Bit	Gamma	Range
Canon Log	Full	10/12/16	Wide DR	Full
Canon Log	Full	10/12/16	Cineon	Full
Canon Log	Full	10/12/16	DCI (Gamma2.6)	Full
Canon Log	Full	10/12/16	Linear	Linear
Canon Log 2	Full	10/12/16	Canon Log 3	Full
Canon Log 2	Full	10/12/16	Wide DR	Full
Canon Log 2	Full	10/12/16	PQ	Full
Canon Log 2	Full	10/12/16	HLG	Full
Canon Log 2	Full	10/12/16	Cineon	Full
Canon Log 2	Full	10/12/16	DCI (Gamma2.6)	Full
Canon Log 2	Full	10/12/16	Linear	Linear
Canon Log 3	Full	10/12/16	Canon Log 2	Full
Canon Log 3	Full	10/12/16	Wide DR	Full
Canon Log 3	Full	10/12/16	PQ	Full
Canon Log 3	Full	10/12/16	HLG	Full
Canon Log 3	Full	10/12/16	Cineon	Full
Canon Log 3	Full	10/12/16	DCI (Gamma2.6)	Full
Canon Log 3	Full	10/12/16	Linear	Linear

■ File naming conventions

[Gamma]_[BitNum]-to-[Gamma]_[Range][Range]_[Version].cube

(1) (2) (3) (4) (5) (6)

例: CanonLog_10-to-BT709_FF_Ver.2.0.cube

1. Gamma before conversion
2. Bit before conversion
3. Gamma after conversion
4. Range before conversion (N: Narrow、F:Full)
5. Range after conversion (N: Narrow、F:Full、L:Linear)
6. Version

■ Data Description

ex) Canon Log 2 to Cineon 10bit Version

Lines starting with #	Overview of 1D LUT files
LUT_1D_SIZE 1024	1D LUT size

```
0.000000 0.000000 0.000000
0.000510 0.000510 0.000510
0.001728 0.001728 0.001728
0.002946 0.002946 0.002946
```

■ Linear LUT explained

```
-0.016363 -0.016363 -0.016363
-0.016298 -0.016298 -0.016298
-0.016234 -0.016234 -0.016234
-0.016169 -0.016169 -0.016169
```

The data shows the Scene Linear values.

ex: 0.200000 = 20% (18% Grey)

1.000000 = 100% (90% White)

■ Conversion LUT to Wide DR

The narrow-range version of Wide DR has a curve that utilizes super white (output exceeding 100%), while the full-range version of Wide DR has a curve that is compressed to stay within 100%.

■ Canon Log 2/3 to PQ/HLG Conversion LUT Reference Signal Level

This LUT is used to convert to PQ (perceptual quantization) and HLG (Hybrid Log-Gamma) as defined in Recommendation ITU-R BT.2100-2. Conversion is performed to obtain the signal levels listed in Table 1 of Report ITU-R BT.2408-1.

■ Data values of each gamma at each luminance (reference values)

Gamma	Range	Scene Linear % (Reflection %)					
		0% (0% Black)	20% (18% Grey)	100% (90% White)	800%	1600%	6400%
Canon Log	Full	0.1251	0.3434	0.5998	0.9929	-	-
Canon Log 2	Full	0.0929	0.3983	0.5623	0.7792	0.8518	0.9971
Canon Log 3	Full	0.1251	0.3434	0.5645	0.8872	0.9971	-
Cineon	Full	0.0928	0.4697	0.6691	0.9325	-	-
DCI (Gamma2.6)	Full	0.0000	0.4622	0.7938	1.0000	-	-
WideDR	Full	0.0000	0.3963	0.7294	0.9927	-	-
PQ	Full	0.0000	0.3790	0.5679	0.8216	0.9048	-
HLG	Full	0.0000	0.3781	0.7291	-	-	-