

# RICOH CD-R DISCS

## Compact Disc Recordable

**Ricoh's next-generation CD-R discs feature a newly-developed phthalocyanine dye that ensures unprecedented durability and compatibility by providing exceptional resistance to direct sunlight, high temperatures and humidity.**

CD-R discs are attracting great attention as a low-bit cost, large-volume recording medium for creating a wide range of original CD-ROMs in such fields as video, music, and photography.

By improving the light resistance and durability as well as expanding compatibility, Ricoh brings the CD-R disc into the mainstream.

### ■ Ricoh's unique phthalocyanine is an extremely durable and light-resistant dye that creates new standards for CD-R discs

Conventional CD-R discs become unstable under direct sunlight, high temperatures and humidity resulting in loss or damage to stored data. Ricoh's original phthalocyanine dye restores user confidence by establishing unprecedented high levels of durability and light-resistant performance.

### ■ The assurance of broad compatibility and a low block error rate

The popularity of Ricoh CD-R discs results from their compatibility with a wide variety of hardware such as CD-R disc writers, CD players, and CD-ROM drives. The preservation of this compatibility was a key factor in the development process of the phthalocyanine dye. Accordingly, Ricoh conducted exhaustive compatibility tests in addition to reviewing and perfecting the base groove form and the membrane thickness of the recording and reflection layers. Ricoh's new phthalocyanine dye CD-R disc achieves the same wide compatibility and low block error rate as that of the conventional cyanine dye.

### ■ Scratch-resistant protective coating enhances durability

The label side of the disc is hard-coated with a protective material. This not only lessens the likelihood of damage but also allows titles and contents to be written directly on the disc with a felt pen.

### ■ Personalize discs with custom prints

Individual labels, created with water-based ink jet printers, can be applied to the disc. Titles can also be written with water-based felt pens. A special water-based ink reception layer on the label side results in faster drying while blur-proof measures ensure images are sharp and bright. The Ricoh lineup now includes a White Label type that allows the same high-quality color printing as on regular paper.

### ■ Specifications

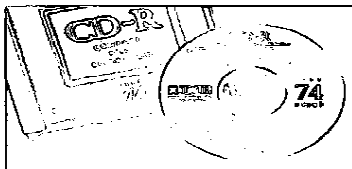
Features	Type 74	Type 63
<b>Dimensions</b>		
Outer Diameter	$\phi 120 \pm 0.3\text{mm}$	
Inner Diameter	$\phi 15 \begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}\text{mm}$	
Thickness	$1.2 \begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}\text{mm}$	
User Area	$\phi 50 \sim 116\text{mm}$	
<b>Recording Capacity</b>		
Time	74 min.	63 min.
Capacity**	650MB	550MB
Linear Velocity	1.2m/s	1.4m/s
Track Pitch	$1.6 \pm 0.1\mu\text{m}$	
Substrate	Polycarbonate	
Recording Material	Organic dye (Phthalocyanine)/ Au double layer (with overcoat layer)	
Reflectance (Rtop)	More than 65%	
Track Eccentricity	Less than $70\mu\text{m}$	
Tilt	Less than $0.4^\circ$	
Write Power	6~7mW (at $\lambda$ : 785nm, NA: 0.5)	
Read Power	Less than 1mW	
Reading Stability	More than $1Q^6$ times (0.7mW)	
Operating Environment	$-5 \sim 55^\circ\text{C}$ , 5~95% RH	
Life Time	More than 10 years ( $5 \sim 25^\circ\text{C}$ , 5~60% RH avoiding any exposure to direct sunlight)	

• Data recorded on a Ricoh disc by recorders from the Orange Book Part 2 standard can be read by several players such as the CD-DA, CD-ROM, CD-ROM XA and CD-I.

• Specifications and appearance are subject to change without notice.

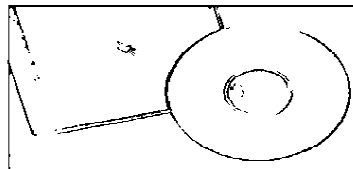
\*\* At mode 1 recording.

Capacity varies depending on format used.



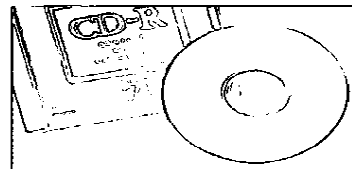
Type 74R-SFH

(Ricoh brand, hard coated)



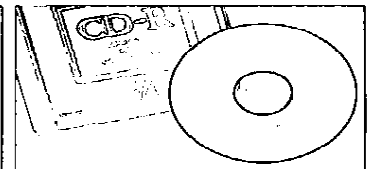
Type 74N-SFH

(No jacket, no label printing, hard coated)



Type 74L-SFP

(Custom Print\*\*)



Type 74L-SFPW

(Custom Print, White Label)

- All types offer 63 minutes of recording time.
- \*\* Can be custom-printed with ink-jet printers
- Conforms to Orange Book Part 2

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